SCOTTISH EDUCATION DEPARTMENT

Ascertainment of Children with Visual Handicaps

Report of the Working Party
appointed by the Secretary of State
for Scotland

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To:

THE RIGHT HONOURABLE WILLIAM ROSS, M.B.E., M.P.,
Secretary of State for Scotland.

SIR,

Introductory

1. You appointed us as a Working Party in December 1966 with the following remit:

> "To consider what guidance should be offered to education authorities in ascertaining children who, because of blindness or partial sightedness, are in need of various forms of special educational treatment."

2. The first meeting of the Working Party was held on 14th December 1966, and, after nineteen full-day meetings of the whole Working Party and eighteen full-day meetings of sub-committees, we now have the honour to submit our Report.

3. We wish to express our gratitude to the persons and organisations named in Appendix I who furnished us with written or oral evidence or both, whether on the general subject of our remit or on particular questions we had to put to them. Their evidence was of the greatest importance to us.

4. Members of the Working Party visited the schools in Scotland and England named in Appendix II. In all of these they were received with great cordiality and helpfulness. As a result of these visits we gained very useful insight into the educational problems of blind and partially sighted children. We wish to thank most sincerely the education authorities and voluntary boards of managers who made these visits possible, and also the head teachers and staffs of the schools concerned who did all they could to help us.

5. In 1947, the Secretary of State asked the Advisory Council on Education in Scotland to review the education of pupils suffering from various forms of handicap. The Council thereupon produced a series of reports on the various handicaps, and one of their Reports—"Pupils who are Defective in Vision"—published in 1950, has been particularly relevant to our work, since it dealt at some length with the problem of ascertaining children with visual handicaps. We shall have occasion to refer at several points to this important publication and shall do so under the brief descriptive title, "The Advisory Council's 1950 Report".

CHAPTER I

The Background

HISTORICAL SURVEY

The Blind

6. The handicaps imposed by total blindness are so apparent that they need not be elaborated. It is readily appreciated that the inability to see print or diagrams or maps is a formidable obstacle to education and that the inability to see objects in the environment renders movement and action so difficult and even dangerous that many kinds of work are impossible. In short, blindness imposes the most serious handicaps on education and on the pursuits of normal life.

7. What has just been indicated is so obvious that it is not surprising that blindness readily invokes the sympathy of sighted people. It is therefore remarkable that, save for a few sporadic efforts, it was not until the 18th century of the Christian era that organised efforts were made to help the blind. These philanthropic ventures began in France but soon made their appearance in other European countries: the Blind Asylum in Edinburgh, for example, was established in 1793.

8. Until the middle of the 19th century, organised help for the blind was concerned more with providing them with the basic needs and comforts of life than with giving them training or education, although there was some development of training in simple crafts which depended on manual dexterity and not on sight.

9. When care for the blind had begun, various workers tried to devise means whereby blind persons might learn to read by touch. Some efforts depended on embossing the ordinary written characters, others on embossing specialised signs, for example, arrangements of dots. By the middle of the 19th century, the two methods mainly favoured were Dr. Moon's, derived to some extent from the familiar print symbols, and Louis Braille's, a system of dots. In 1869, a committee set up to reach decisions on the relative merits of these systems reported in favour of the method now known as braille. After some years schools for the blind in Britain agreed to use this system. This standardisation made it possible for libraries to be set up and for education to be pursued along generally accepted lines. In the last hundred years, many schools for the blind have been established, the Blind School in Edinburgh, now known as the Royal Blind School, being established in 1835.

10. History shows that it is not unusual, indeed it is normal, for the welfare and education of a handicapped group to be undertaken first as a voluntary philanthropic effort. Gradually, however, the work becomes known and acknowledged, and as its social importance is increasingly recognised, a time is reached when the public conscience demands that the State support it as a duty. As a result its benefits come to be extended to all the handicapped of the group. So it has happened with the visually handicapped: public authorities now play

a major part in providing educational and welfare services for the blind. It is as a result of the Government's interest that this Working Party has been set up to advise local authorities so that the " comb-out " of the grades of seriously visually handicapped children is as sound and as thorough as possible, in order to ensure that their educational treatment is appropriate.

The Partially Sighted

11. Since the beginning of the present century, many educational workers have considered that a number of culdren who are not blind are nevertheless so handicapped by defective sight that they cannot profit from ordinary schooling. For this reason special classes were established for a handicapped group known as the " partially blind ", or, more recently, and more appropriately, the " partially sighted ". Naturally these classes developed mainly in the larger centres of population.

12. Before 1939, a considerable number of the pupils receiving education as partially sighted children were myopic, that is to say, they were extremely short-sighted. Their sight often deteriorated at adolescence. One of the principal aims dominating their education was sight-preservation. It is now accepted that, save in rare cases, pupils do not harm their sight by using it. When the vision of a myopic child deteriorates at adolescence, this is normally the result of growth ; it is never the result of eye strain.

13. Although medical views have changed, the fact remains that there are still numbers of children so handicapped by defective sight that they require special educational treatment. They fall into an educational group intermediate between the blind and the fully sighted.

THE CHILDREN THEMSELVES

The Blind

14. When the young blind child begins to crawl or walk, one of the most unkind of his disabilities shows itself : because he does not see where he is going, he bumps into obstacles ; he may lose confidence ; he may become frustrated and ill-tempered. At this stage an over-protective parent may discourage movement or permit movement only when the child is carefully guided by the hand. In this way the parent may, from the best of motives, deny the child the exercise which is essential for his physical well-being and development. The ideal environment at this stage is a large free floor-space, and a large flat area out of doors. Such an environment may not be found in or beside the home, but is normally available in a nursery school, whether for blind children or for sighted children. Where free flat spaces are available, the young child has an opportunity to learn to walk and to run with a minimum of mishaps. He enjoys the activity, for it is the natural activity of his stage ; he is not frustrated ; he gains the exercise which is important for his further physical development.

15. Any person, therefore, who has the responsibility of guiding or helping the parents of a young blind child should consider how protective the parents are and whether the home environment gives opportunity for some relatively safe " running about ". In the light of his observations he can advise the parents how to give their youngster some freedom if he is to stay at home, or perhaps even seek to persuade them to permit the child to attend a nursery school.

16. When the child becomes a pupil at school he must begin to learn braille. Braille is not easy and it is a mistake to imagine that, because a child is blind, nature gives him, by way of compensation, an additional sensitivity of the skin to help him to feel braille characters. There is no evidence whatever that loss of one sense brings about compensations in the others ; loss of one sense, however, does force the child to rely more heavily on his other senses and so he may train the others to a pitch which is not commonly achieved by sighted people. It is through reading in braille and through oral work that further educational progress is made. There are some school subjects, however, which obviously present particular difficulties. The blind person finds it hard to appreciate spatial relationships involved, for example, in geometry or technical drawing ; some forms of art are impossible ; difficulties are presented by map work, by experimental work in biology, and by those branches of physics or chemistry or handwork which demand measurements or the perception of colour.

17. Despite these handicaps most blind pupils at the age of 15 appear remarkably normal ; they move round the school with a surprising degree of confidence; they have reasonably well developed minds, with perhaps specialist interests in such subjects as music. On the other hand their posture is often impaired ; indeed their general physique is probably less well developed than it might have been if the full range of physical activities had been possible.

18. In early adolescence a new difficulty may arise. The pupil may have scholastic gifts which lead him to undertake an academic course giving him intellectual stimulation and satisfaction but no adequate or sure vocational outlet. In this case, the educational adviser is in a dilemma : does he recommend a school course which gives intellectual satisfaction, but which may lead to deep and bitter vocational frustration ; or does he recommend a course where the educational fulfilment is less but which is much more likely to lead the pupil to a job offering independence and the pride of achievement ? This is a most difficult choice, but, where the intellectual gifts are considerable and where the pupil's personality is balanced and stable, it may be considered, and he himself may agree, that it is worthwhile to pursue education for its own sake even at the risk later of vocational disappointment.

The Partially Sighted

19. These children can see, although their vision even with spectacles is poor by normal standards. Those with experience of such pupils regard them as being from the educational point of view much more akin to the sighted than to the blind. For example, they are almost as mobile as ordinary children : they do not bump into obstacles or into one another, although a few pupils whose sight is very bad at distances exceeding 3 ft. require to be particularly careful on stairs and in unfamiliar surroundings.

20. Despite what has been said, the disability of partially sighted children is sufficiently serious for them to be regarded, quite properly, as a handicapped though not a homogeneous group. Their defects of vision differ in kind and intensity. In most cases their near vision is more useful than their vision at distances exceeding 3 or 4 ft. ; in general, objects at a moderate or greater distance are blurred to the extent of being almost or completely unrecognisable, even when the maximum help is given with spectacles. In some cases, the field of

vision is seriously curtailed so that the helpful signs or signals which a normal person constantly receives out of the corner of the eye are absent.

21. The partially sighted are seriously handicapped in the classroom in a number of ways. They may fail to perceive nuances of meaning which are communicated by facial expression rather than by words. Although some of them can read ordinary print (they may require to keep the page very close to their eyes), others can read only print which has been slightly enlarged and a few can read only when the print is really large. What has been said concerning reading applies also to writing and to the use of atlas maps or printed diagrams. Further, the teacher cannot make the same use of a blackboard or wall illustrations or of a projector as she would in an ordinary class ; indeed, all school subjects involving vision present special problems for the teacher and pupil.

22. From what has been said, it will now be evident that some partially sighted children may make progress in the infant classes of an ordinary school since the readers in use at that stage are printed in large clear characters. These pupils may, however, fail to make headway further up the school when ordinary print is in general use, and it is at this point that special educational treatment may become necessary ; other partially sighted pupils may, however, require such provision from age 5, if they are unlikely to be able to make adequate use even of infant reading books.

23. In general, it will be clear that the ascertainment of partially sighted children should be achieved at as early a stage in their school career as is educationally necessary. It may well be that it is only by ascertainment and early special education that the pupil has a chance to make adequate school progress and to escape the frustrations of educational failure. Where a pupil is retained too long in the ordinary school he may suffer not only in his education but also from frustrations in the social field ; for example, sighted children may be unwilling to play with him as he is unlikely, because of his handicap, to be able to take part successfully in many games for which reasonable sight is required.

CHAPTER II

The Main Problems

24. In this Chapter we endeavour to identify the main problems, or classes of problem, with which our remit has faced us. The rest of the Report is largely an elaboration of the issues which are touched upon in this Chapter.

Ascertainment

25. The classification of pupils into three groups—(*a*) those who require to be educated in a school for the blind, (*b*) those who require to be educated in a school for the partially sighted and (*c*) those who can be educated in the ordinary school—implies two border-regions or frontiers, viz :— the frontier between (*a*) and (*b*) and the frontier between (*b*) and (*c*). The task with which we are principally faced is to define these frontiers in such a way that each child, after testing, may be appropriately placed, for the purposes of education, in one of the three categories.

26. In addition to the basic problem which has been indicated, the task of allocating a child to an appropriate school may be complicated if he is suffering to a greater or lesser degree from some other handicap such as chronic ill-health, mental retardation or deafness.

27. It is obvious that a fundamental, and often decisive, part of the examination of the child will be undertaken by the ophthalmologist. But, before a decision is reached, it is always wise to give due consideration not only to the child's vision but also to his general health, his intelligence, his personality (e.g., whether he is persevering or not) and his home background. The specialists concerned in this comprehensive examination should agree amongst themselves the appropriate type of education for the child and at this stage the situation should be explained to the parents in order to enlist their co-operation.

28. The conclusion reached by the group of specialists can go forward to the education authority only as a recommendation. In the light of this recommendation the education authority may then decide that the child should go to a special school, whether for the blind, for the partially sighted or for those with multiple handicap, and it is this decision which constitutes ascertainment. It is a formal step provided for in the Education (Scotland) Act 1962, which also requires notice of ascertainment to be sent to the parents.

Educational Provision

29. It is a matter of common knowledge and of some regret that because of competing claims on resources and also, in certain areas, because of the sparsity of population, Scotland has been unable to provide special schools on the scale that may be necessary. It sometimes happens, therefore, that a child is regarded as suitable for a particular type of special educational treatment, yet, in the absence of an appropriate school or class, he is ascertained for another type, presumably the most suitable substitute. The unfortunate and inevitable result is that the pupil does not get the type of education best suited to his needs.

30. The point just mentioned also gives rise to misleading educational statistics because it is the present statistical practice to classify a pupil's handicap according to the type of school he attends whatever may be the nature of his particular handicap. In view of this, we *recommend* that for each pupil two facts should be recorded (*a*) the type of education for which he is best suited and (*b*) the type of education to which he is assigned. Once valid statistics of this kind are accurately known, it will be possible to gauge the problem of appropriate educational provision more accurately than at present. Furthermore, divergencies between statistics (*a*) and (*b*) above would show, for Scotland as a whole and for the areas within it, the types of provision that are lacking.

31. There is a particular aspect of educational provision which impinges on our remit. Even if the safeguard regarding statistics which we have just recommended were adopted, we think it not unlikely that those concerned with diagnosis and ascertainment will hesitate to recommend a particular educational course if such is not available. In view of this possibility, we decided to examine the provision in Scotland for children with visual handicaps to see whether there were gaps which might have an influence on ascertainment and so have an adverse effect on the full educational development of some children.

Areas of Small Population

32. Fortunately, although blindness and partial sightedness are not uncommon, the incidence is not high. It is clear that large cities like Glasgow and Edinburgh produce a sufficient number of cases to make educational provision practicable. On the other hand, administrative areas with a small population like the Counties of Sutherland, Bute or Peebles have few cases of handicap. Such counties could not set up viable special schools for the visually handicapped and might have difficulty in securing the services of some of the specialists required to examine and to make recommendations regarding the few cases that they had. We have therefore felt it necessary, in all our work, to remember that Scotland includes its Sutherlands as well as its cities.

Education and Adult Welfare

33. It was mentioned in the historical survey given in Chapter I that the State has come to the aid of persons suffering from severe visual handicap by helping in the provision not only of education but also of welfare and vocational services. Although the welfare arrangements are mainly for the adult blind, children are also eligible for certain benefits. On the adult side, the State is directly responsible for certain welfare and vocational services which include special vocational training, help in finding jobs, the payment of certain Social Security benefits ; the State also aids welfare services provided by voluntary bodies or local authorities.

34. According to present arrangements, a child may be " ascertained " to be blind under the Education Act, which means that he is unable to benefit from a form of education which requires sight, and he may also be " registered " as blind under the National Assistance Act 1948, because he is deemed unlikely to be able to enter any form of employment which requires sight. The criteria for ascertaining a child as blind for the purposes of education are not, and need not in justice be, identical with the criteria for registration, which are fundamentally related to employment. It thus happens that, under present procedures, a pupil may be ascertained to be partially sighted for educational purposes and yet registered as blind for welfare and ultimately for vocational purposes.

35. The two standards of judgement, the two sets of criteria, give rise to difficulties. It is confusing to parents if their child is ascertained to be partially sighted, yet registered as blind ; they may distrust the ophthalmologists who reach two apparently different conclusions ; they may resent the educational classification of their child as partially sighted when they know that certain welfare benefits are available only to the blind. It has also been brought to our notice that some education authorities, too small to make provision for visually handicapped pupils, seek to have a child registered as blind even when he is partially sighted in order to gain his admission to the Royal Blind School, which appears to them to be the only centre at present available for his education. As a result of this, the Royal Blind School has had several pupils in attendance in recent years who had useful eyesight and for whom the education normally provided at the School was quite inappropriate. In one particularly unfortunate case the pupil was able to read quite well with the help of ordinary spectacles. This difficulty would not arise if schools for the partially sighted were more readily accessible to children from all areas.

36. At an early stage in our work we noted the difficulties with which the last two paragraphs deal. We have examined whether there need be two sets of criteria for visual handicaps, one for purposes of education and the other for purposes of welfare and of vocational guidance, and have come to the conclusion, and *recommend* that, so long as the child is under 15 years of age, the criteria appropriate to education, which we give in detail in Chapter V, should be operated both for the purposes of educational ascertainment and of registration under the welfare services. We shall fill in the details of our recommendation and deal with the conservation of existing rights of children to welfare benefits when we examine ascertainment procedure in Chapter VI and employment problems in Chapter VIII.

CHAPTER III

The Present Educational Position

Statutory Background

37. It has already been pointed out that the State and local authorities have now assumed much responsibility for the education of the visually handicapped. The Government itself has enacted that, like other children, all blind and partially sighted children are to be educated according to their " age, ability and aptitude "; it subsidises schools for the visually handicapped whether provided by an education authority or by private managers ; it inspects the schools with the object of helping them to maintain or increase their efficiency ; and it sets up from time to time Advisory Councils, special committees or working parties (like the present) to survey the field or part of it in order to recommend improvements.

38. The precise responsibilities of education authorities in regard to the education of handicapped children are laid down in the Education (Scotland) Act 1962. Under that Act education authorities who must ensure appropriate education for all the children in their areas have to ascertain, in the sense described in paragraph 28 above, those handicapped children of school age who require to receive their primary and secondary education by means of special educational treatment, i.e., education by special methods appropriate to the special requirements of pupils who suffer from disability of mind or body.

39. The Advisory Council's 1950 Report (see paragraph 5) laid emphasis on the different problems affecting the blind on the one hand and the partially sighted on the other. It also gave guidance on ascertainment. The views expressed in the 1950 Report have ever since been the main source of guidance, in regard both to administrative and to practical matters relating to the visually handicapped.

40. The series of reports from the Advisory Council on the separate " disabilities of mind or body " led the Secretary of State to make the Special Educational Treatment (Scotland) Regulations 1954, which set out the categories of pupils requiring special educational treatment. The blind and the partially sighted were recognised as separate groups, defined as follows :

> " Blind pupils, that is to say pupils who have no sense of sight or whose sense of sight is, or is likely to become, so defective as to be of no practical

> value for reading or writing: and partially sighted pupils, that is to say pupils whose sense of sight is, or is likely to become, defective but is, or is likely to remain, of practical value for reading or writing."

41. We have observed that the above definition of "partially sighted pupils" seems to include children who, despite some visual disability, can still profit adequately from the normal instruction of ordinary schools. We therefore *recommend* that the definition be reworded thus:

> partially sighted pupils, that is to say pupils whose sense of sight is, or is likely to become, so defective that they cannot profit from the normal instruction of ordinary schools but nevertheless, is, or is likely to remain, of practical value for reading or writing.

42. Apart from the change just recommended, the definitions of the Regulations seem to be adequate for legal and administrative purposes. They have the advantage of being simple and non-technical; they do not seek to define the borderlines with clinical precision. For the scientific work of ascertainment more exact clinical criteria are required and these we outline in Chapter V.

43. Having defined the categories of handicap, the 1954 Regulations go on to prescribe educational arrangements. They provide that a blind pupil should be educated in a school for the blind but permit a degree of flexibility regarding the partially sighted. The Regulations say that a handicapped pupil who is not blind or deaf (i.e., he may be partially sighted) should be educated in a special school or in an ordinary school or that arrangements may be made for his education in a hospital or in his home, as may be appropriate.

The Schools

44. The following table shows the number of blind or partially sighted children on the rolls of special schools at January 1968. It is not unlikely that with better or fuller ascertainment, the numbers would show an increase. It is to be noted that while the schools are listed according to the area in which they are situated some take pupils from adjoining areas. The two schools for the blind are residential schools and between them serve the whole country.

	Blind	*Partially Sighted*
Schools for the Blind		
Edinburgh, Royal Blind School	135	—
Glasgow, St. Vincent's (Tollcross)	34	—
Schools for the Partially Sighted		
Dundee, Duncarse School	—	9
Edinburgh, Kaimes School	—	43
Glasgow, Kelvin School	—	59
Totals	169	111
Other special schools		
Aberdeen, Beechwood School	—	19
Dunbarton, Auchentoshen School	—	13
Lanarkshire, Dalton School	—	10
Lanarkshire, Drumpark School	—	12
Lanarkshire, Knowetop School	—	6
Stirlingshire, Dawson Park School	—	5
Renfrewshire, Glenburn School	—	4
Renfrewshire, Sandyford School	—	10
Totals	—	79
Grand Totals	169	190

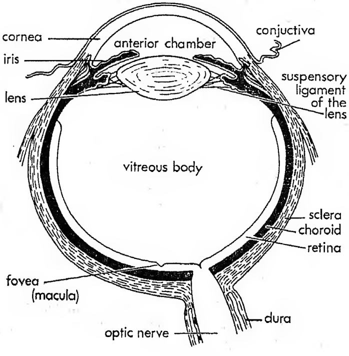
45. In addition, a number of children with double, or multiple handicap, including partial sightedness, were at special schools (including occupational centres) but classified under other defects ; and a number who are known to be partially sighted were in ordinary schools and so omitted from the statistics altogether. Furthermore, children so seriously handicapped as to be unsuitable for any form of education or training remain at home or in hospital ; in a small group of these the multiple handicap includes defects of vision.

46. It has been emphasised to us by some of our witnesses that while a satisfactory range of secondary education is provided for blind pupils, the schools for the partially sighted make, in their view, somewhat inadequate provision of secondary courses, particularly academic courses leading to the Scottish Certificate of Education. We have, therefore, examined the position at the schools listed in paragraph 44. While the schools may legitimately claim that they offer the types of education for which there has been a demand and for which the majority of their pupils are fitted, there does seem to us to be a need, over Scotland as a whole, for fuller provision of secondary education, particularly of an academic kind. We shall return to this topic in Chapter VII.

CHAPTER IV

Medical Background

47. Anyone familiar with the principle of the camera will readily appreciate the working of the eye, the main parts of which are illustrated in the accompanying sketch. Light from an observed object passes through the cornea and is focussed by the lens to fall on the retina, from which the image of the object is carried to the brain, there to be interpreted. Not all parts of the retina are equally sensitive ; it is only with the central part—the fovea centralis—that we can resolve fine detail, read small print or see the full range of colour.



48. The efficiency of the eye may be reduced in a number of ways and, for simplicity's sake, it is proposed to describe some of these under three headings:

blurring of vision ;
loss of central vision ; and
loss of visual field.

Blurring of vision

49. Vision becomes blurred if light does not readily reach the retina and this happens most commonly through clouding of the cornea (keratitis) or through opacity of the lens (cataract). As in almost all types of eye disease, the visual loss varies from case to case depending on the severity of the condition. Vision, therefore, may range from near normal to the mere ability to distinguish light from dark. Other diseases which lead to this type of visual loss include congenital glaucoma (buphthalmos) and various inflammatory diseases of the eye. The blurring that is due to imperfect focussing can normally be corrected by spectacles.

Loss of central vision

50. When a normal eye is in use, the panorama of objects, whether near or far, seen by the eye is known as the " field of vision" or the " visual field ". Even with a perfect eye the central part of this field is seen more distinctly than the objects in the surrounding panorama, which are appreciated with greater or less degrees of clarity, depending on how far they lie from the centre line of vision.

51. If the central part of the retina is unhealthy, the ability to discriminate fine detail at the centre of vision will be destroyed, in whole or in part, even although peripheral objects may still be seen. Defects of central vision are an important cause of partial sightedness, in that they interfere seriously with reading ability, although if peripheral vision remains normal the individuals concerned may not be seriously handicapped in finding their way about, even in traffic. Among the diseases causing loss of central vision with preservation of peripheral sight are optic atrophy, toxoplasmosis, nystagmus, chloroiditis and albinism (see Glossary in Appendix III). Mention may be made here of degenerative myopia, a rare form of myopia or short sight. Whereas the usual type of myopia can be corrected by spectacles, degenerative myopia is quite different and in its advanced form is associated with damage to the retina and with reduction of central vision.

52. Although defects of central vision cannot usually be improved by ordinary spectacles, special magnifying aids may have great value. By increasing the size of the picture being formed within the eye, magnifying glasses or telescopic spectacles sometimes improve vision, and particularly reading vision, dramatically. The type of aid required varies from one individual to another, and can normally be determined only by a process of trial and error. (See paragraphs 145 to 147 in Chapter IX.)

Loss of visual field

53. In some diseases, mostly those involving the brain, the individual cannot see anything either to the left or right of the centre line of the eye, as the case may be. This condition is known as hemianopia (half-sight) and, though uncommon, is the cause of visual defect in some children.

54. In some ocular diseases, e.g., retinitis pigmentosa, the " panorama" is progressively diminished until the subject has only a very restricted field of vision or none at all.

Sight-saving and other misconceptions

55. At one time the view was taken that all children suffering from a severe degree of myopia should be protected from eyestrain. The result was the establishment of so called " myopic schools" and " sight-saving" classes, in which close work and physical exertion were forbidden and education was conducted by special methods. By 1950, when the Advisory Council reported, more and more experts were doubting whether severe myopia itself constituted a reason for admission to a special school, and whether the use of the eyes in close work had a deleterious effect on short-sight.

56. Through a better understanding of the fundamental factors involved, experts are now agreed that the use of the eye for close work or for any other normal purpose can have no ill effect whatever, and that any restriction on the use of the eyes is entirely unjustifiable. There is, even now, some evidence that the older view continues in some quarters, and that restrictions are still being placed on the activities of children suffering from myopia in the mistaken notion that such restrictions will reduce further visual loss. The modern agreed view is that only rarely need physical activities be restricted and then solely in order to protect the eye from injury. Thus virtually all visually handicapped children can take part in any sport or game which they can see well enough to enjoy, provided that sensible precautions (in particular the provision of splinter-proof glasses) are taken to avoid injury from broken spectacles. There is however one sport which should be absolutely forbidden, and this is boxing. The majority of ophthalmologists would now agree that this is a dangerous sport.

The Changing Picture of Visual Handicap

57. For the reasons just stated, there are fewer myopic children in special schools than was once the case. There are also fewer whose defects of vision are due to infection ; for example, keratitis used sometimes to occur as a sequel to certain common infectious illnesses or to ophthalmia neonatorum, especially if the child concerned was cared for under poor standards of hygiene and nutrition. Congenital syphilis also led to a variety of ocular changes including keratitis. Today, modern drugs, better social circumstances and improved standards of medical care, housing, hygiene and nutrition have all contributed towards the virtual elimination of infection as a cause of visual handicap. The present position, therefore, is that most children who now attend schools for the blind and partially sighted suffer from defects which are congenital or hereditary. At the same time it must not be forgotten that injury is all too common a cause of blindness and therefore campaigns for safety might with advantage stress the importance of avoiding eye accidents.

Standards of vision and its measurement

58. A significant part of the present report is concerned with the measurement of standards of vision. The most generally accepted standards are those provided by the Snellen test which makes a comparison between (*a*) the distance at which an object is clearly seen by the eye being tested and (*b*) the distance at which the

same object is clearly seen by a normal eye. For optical reasons six metres (about 20 feet) is accepted as the standard distance for making tests, and at this distance a series of letters, numerals or pictures in graduated standard sizes is shown to the subject under test. If the eye being tested can see at six metres what was designed to be seen by the normal eye at six metres, the vision is normal and is expressed as 6/6. If however the eye can see at 6 metres only what the normal eye can see at 24, the measure is 6/24. In this way a scale is constructed ranging from 6/6 which denotes normal vision through 6/9, 6/12, 6/18, 6/24, 6/36 to 6/60. If the eye tested can make no useful discrimination at six metres, tests are made at lesser distances—e.g., at three metres or one metre and so we may get such measures as 3/60 or even 1/60. These Snellen measures have the appearance of fractions but they are not fractions and should not be treated as such.

59. Unfortunately, from the ascertainment point of view, the above normal measures of visual acuity take into account only the vision at six metres (or exceptionally at three metres or one metre), while it is in fact reading vision which is of at least equal importance where education is concerned. The two functions near vision and distant vision, are not necessarily closely related and it is not uncommon to find children whose near vision enables them to read print but who are quite unable to discriminate objects at greater distances.

60. The near or reading vision of an adult can be tested by confronting him with the varying sizes of type used in printing. These sizes are known by their point numbers*. The point size of the print on the near vision test cards ranges from 5 point, the smallest, to 48 point or larger. Near vision is recorded by noting the smallest size of type that the eye can see to read and is recorded as N.5, N.6, N.8, etc. (the letter " N " denoting " near").

Visual testing in the young

61. When a child is old enough to read letters and name them, his distant vision can be tested from an ordinary Snellen card. Before the child can read he may be tested on the E test which is based on Snellen principles and requires him to note the direction in which the letter E is pointing. When tests of the Snellen type are carried through at distances of less than 6 metres, the actual distances—or other special circumstances of the test—should be carefully noted.

62. In the examination of young children other possibilities are open: the child may be asked to match symbols or to follow the movement of white balls. Tests designed for infants and young children have now been collected in the STYCAR set of tests (Standard Tests for Young Children and Retardates) and with them some idea of the acuity of vision may be obtained for children down to the age of 18 months. Apart altogether from specific tests, the experienced ophthalmologist may gather significant clues from the child's general behaviour and the extent to which he relies on touch.

63. Although some assessment of a young child's distant vision is possible by the means just described, no reliable measure of near vision can be obtained until the child can read. We understand that research work is going on in regard to the testing of vision, especially the near vision, of young children and we, for our part, *recommend* that this should be pursued as actively as possible since the subject is of great practical importance.

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* When letters are made from a block 1/72 of an inch in height, the resulting print is " 1 point ". The point number of larger print denotes the number of seventy-seconds of an inch in height of the block from which each letter is made. This report is printed mainly in 10 on 11 point.

The problem of prognosis

64. The ophthalmologist is often asked to say whether a child's sight will deteriorate and, if so, how quickly. It is only in a very limited number of cases that a forecast can be made with any useful degree of accuracy, for every case is different and two examples of a similar condition may develop in entirely different ways. For example, one patient suffering from retinitis pigmentosa (a hereditary form of visual defect) may be blinded in early adult life, while another may retain useful vision until his retirement. This is one reason why the condition of each individual child must be reviewed at intervals so that it can be decided whether the provision for his care remains suitable.

Posture

65. Many children, whether their sight is normal or defective, tend to read at a closer than normal reading distance. This habit, more usually a manifestation of psychological than of visual difficulty, is of concern to parents and teachers, but it does not harm the eyes. It may however lead to round shoulders and a bent back and therefore the habit should be discouraged in those with normal eyes. A child suffering from visual handicap, on the other hand, should be allowed to read with his nose as close to the book as he wishes. In the last resort it is more important that a child should read than that he should have a perfect posture. Efforts should nevertheless be made to prevent bad posture from arising in schools for partially sighted children, for example, by the use of fairly upright lecterns and by the inclusion in physical education of exercises designed to prevent and correct postural defects. The school doctor should make a point of taking a special interest in the posture of partially sighted children.

Spectacles

66. The diseases with which we are principally concerned lead to damage which cannot usually be fully corrected by spectacles, but it must not be forgotten that most children with visual defects are suffering only from errors of refraction (abnormalities of focussing), such as long sight, short sight and astigmatism. These can normally be corrected by spectacles. In some cases, where eye disease is associated with an error of refraction, spectacles may be found to improve vision though not to correct it entirely. Before there is any question of the need for special educational treatment for a child who has defective vision, it is essential that his eyes should be examined by an ophthalmologist and a record made of the best standard of vision obtainable with suitable spectacles.

67. Teachers and school medical officers are familiar with the problems to which spectacles give rise. Many children who require them and have them fitted do not wear them regularly. Spectacles are liable to damage from boisterous behaviour and frames become twisted and distorted. Again, when breakage cf frames or lenses occurs, replacement takes several days at least, and during this time the child's school progress suffers. We, therefore, *recommend* that:

(1) Children who have been ascertained to be partially sighted should always be provided with two pairs of spectacles; and ophthalmologists should have discretion to prescribe two pairs for other children who would be seriously handicapped without glasses.

(2) Efforts should be made to provide a standard school frame which is both stronger and more attractive than is available at present.

(3) Parents and teachers should be encouraged to ensure that children who require them should wear their spectacles regularly.

CHAPTER V

The Criteria of Ascertainment

68. As has been pointed out in Chapter II, we have been concerned as a working party with the grouping of children into three educational categories—(*a*) those, including the totally blind, whose sight is so impaired that they cannot benefit from sighted methods of instruction ; (*b*) those whose eyesight is so impaired that even with spectacles they cannot benefit from ordinary schooling but who can nevertheless benefit from sighted methods of instruction ; and (*c*) those who see well enough, either with the naked eye or with spectacles, to derive proper benefit from ordinary schooling. In dealing with the criteria of ascertainment we shall seek to set down the considerations which should guide those whose duty it is to decide into which of the three groups just mentioned a child should be placed.

69. We wish immediately to emphasise that the two frontiers separating the three groups cannot be defined with precision or in terms of strict objective criteria. The decision that a child is fit for one kind of education rather than another depends upon several factors, of which his vision, though extremely important, is only one. The decision in fact must rest on a balanced judgement—a professional assessment—based upon consideration of a series of factors which may not be of equal importance but which may nevertheless all be relevant.

VISUAL CRITERIA

70. Despite the importance of the other factors of ascertainment just mentioned, by far the most significant single factor is the child's degree of vision, both distant and near.

71. In 1934, a committee appointed by the Board of Education (now the Department of Education and Science) submitted their Report on Partially Sighted Children. Their recommendations were based on the principle that the main purpose of a school for the partially sighted was to conserve rather than to use sight. As the medical view has changed fundamentally (see paragraph 55) the visual criteria of ascertainment given in that Report can no longer be regarded as valid.

72. The Advisory Council's 1950 Report gave two simple criteria for determining whether a child was to be regarded as blind, viz. :

(1) his visual acuity, as measured by the Snellen Test had to be 6/60 or worse in the better eye (when improved with the most suitable spectacles) ; or

(2) the condition of his eyes, including deteriorating conditions, might prevent him from being educated adequately by methods requiring vision.

73. We regard the first of these criteria as being too sweeping and have ourselves seen children with vision distinctly worse than 6/60 who have been making good progress in schools for the partially sighted. In our view criteria

expressed in Snellen terms pay insufficient attention to near vision, a matter of the greatest importance in the education of partially sighted children. So far as these children are concerned the 1950 Report accepted the recommendations of the 1934 Report, that is to say they were largely concerned with sight-saving.

74. As a result of the National Assistance Act 1948, local authorities have powers to make certain welfare arrangements for the blind and for persons with serious visual handicap. The present criteria for assessing visual handicap under that Act were set out by the Department of Health for Scotland (the appropriate department would now be the Scottish Home and Health Department) in Appendices to Circulars No. 71 of 24th November 1954 and No. 51 of 23rd September 1955. We have given close attention to the detailed advice on assessment offered in those Circulars, and quoted in Appendix IV. Our own guiding lines which are given below are in close conformity with what is said in the Circulars.

First Frontier : Blind/Partially Sighted

75. The critical question at this frontier is whether the child has sufficient sight to be of educational use In practice this means a decision must be reached on whether he can, or is likely to be able to, read ordinary or enlarged print, or must rely on braille.

Snellen Tests—The following standards are suggested :

(*a*) A child with visual acuity below 3/60 should, subject to the results of other tests, be regarded as blind.

(*b*) A child with visual acuity of 3/60 but less than 6/60 should be very seriously considered for ascertainment as blind unless other visual tests and other considerations lead to the concluson that he may be regarded as partially sighted.

(*c*) A child with visual acuity of 6/60 or better should, save in ecceptional circumstances, not be regarded as blind.

Near Vision—Ability to see ordinary or somewhat enlarged print with, if necessary, the help of spectacles or low vision aids (see paragraph 146(*f*)) is of quite critical educational importance. Tests with 8 point print (equivalent to that of the average adult book) and with larger print should be used. If a child can read N. 18 with the help, where appropriate, of spectacles or of low vision aids, it is normally appropriate to try him in a school for the partially sighted where he may make reasonable progress In general a child should not be regarded as blind, *for the purposes of education*, if his near vision proves adequate for the purposes of reading *however poor the Snellen result may be* At this point we mention parenthetically that it is in the importance attached to near vision that the educational criteria for blindness which we recommend differ most from the criteria employed for health and welfare purposes.

Field of Vision—Tests of distant and near vision alone do not reveal defects in the field of vision which must therefore be separately examined. This is important as marked contraction of the visual field, particularly in the lower half, renders the total handicap much more serious.

Second Frontier : Partially Sighted/Normal

76. The definition of the second frontier is fraught with greater difficulties and uncertainties than the definition of the first. We have already said that if a child

can use his eyes to read, he should be taught by visual means. If the partially sighted child can read, he can do a wide range of paper work and in this respect resembles the children of the ordinary school. It is his handicap in relation to more distant vision and/or to his field of vision which distinguishes him most from the ordinary child : he is unable to profit fully from blackboard work, from wall diagrams or from demonstrations given by the teacher and therefore cannot profit from the education normally provided in the ordinary school.

Snellen Tests Where the Snellen rating is 6/18 or worse, in the better eye when helped by spectacles, the child should be considered for a school for the partially sighted and the final judgement should depend on other factors. Where, however, the rating is 6/24 or worse, the presumption is strong that the child is unfit for ordinary schooling.

Near Vision—Although near vision is of great educational importance, its assessment, as mentioned in paragraphs 62 and 63 involves great difficulty and in fact it cannot yet be adequately measured except in tests dependent on the reading of print. For this reason final diagnosis may not be feasible until the child has started school and been given the opportunity to learn to read. The child whose vision is barely good enough to enable him to read N. 8, the size of print used in an ordinary adult book, may be able to start off in the ordinary school but when the use of much smaller print (e.g., in dictionaries) becomes too frequent and too important to permit him to continue in attendance there with any prospect of success, he may require transfer to a class for the partially sighted.

Field of Vision—A child whose field of vision is seriously contracted will possibly miss too much in the ordinary school to enable his progress to be satisfactory.

NON-VISUAL CRITERIA

77. In this section of the Report we show, by examples, how age or maturity, school progress, intelligence, disposition and home environment, will, in particular cases, be relevant in determining to which group a child belongs, that is to say, to which kind of school he should go.

Age or Maturity

78. Two examples will suffice :

(*a*) Sometimes educational ascertainment may involve a decision as to whether the child should go to a residential school. In these cases the personality and social development of the child and the circumstances of the home will be relevant but maturity or immaturity may itself be a factor to be considered.

(*b*) We have already mentioned that some partially sighted children, though unable to read ordinary print, can see the larger characters used in infant readers. In these cases age may largely determine placement—at the infant stage in the ordinary school and in a special school later.

School Progress

79. As has been pointed out the testing of young children is difficult and indeed it may be the deliberate policy of those responsible for ascertainment to try out a particular child in one type of school before ascertaining him for a

school of another kind. In all such cases, the progress which the pupil makes at his first school may give a clue of the greatest significance regarding his correct placement. Amongst the points which must be watched there are two to which we draw attention :

(*a*) The mastery of reading involves the ability to look ahead and to scan a page. The partially sighted child may learn to read in a restricted sense but may have no power to attain such mastery. In such cases the question must be faced whether he could attain greater power through braille, the medium of the blind school.

(*b*) It is easy to be satisfied with the placement of a child who is making "*good* progress". If, however, the pupil is much above average in ability, he should not be regarded as properly placed unless he is making "*very good* progress".

Intelligence or the ability to learn

80. It is undoubtedly true that a pupil of high intelligence often has the ability and resource to overcome obstacles which would baffle a less gifted child. Thus, for example, a clever child might well contrive successfully to follow from an atlas map on his desk a geography lesson given by his teacher from a wall map, a feat which might be beyond the powers of an average pupil. It might, therfore, appear to those responsible for ascertainment that an able child might in an ordinary school achieve a degree of success beyond the reach of a less able pupil with similar handicap. But the point made at the end of the last paragraph remains relevant—a pupil with high ability should be so placed as to permit a correspondingly high achievement.

81. Another matter which should be remembered by those concerned with ascertainment is that braille is more difficult to learn and to use than print.

Emotional and social disposition

82. Some children are shy and others expansive or extroverted ; some are timid, others adventurous ; some like to be sheltered, others to be independent ; some are easily discouraged while others are determined and purposeful. The psychologist or the experienced teacher who has had a proper opportunity to assess a visually handicapped child may well be able to predict his reactions to a school of a particular kind and to foretell, for example, whether he is likely to overcome the difficulties imposed by the ordinary school or will require to attend a school for the partially sighted where teaching conditions will be planned to meet his needs. Again, consideration of emotional factors (together with the child's age and home environment) are most relevant when transfer to a residential school is contemplated. In some circumstances, such a move would be entirely beneficial, in others the emotional disturbance would outweigh the possible advantages of the change.

Home environment

83. Those responsible for the professional advice on which ascertainment depends should consider the nature of the home environment as reported to them by the medical practitioner, teacher, health visitor, social worker or other professional helper who has accurate knowledge of the home. Assessment of the

home may impinge on ascertainment in different ways. For example, a home may be over-protective of a handicapped child, but if those responsible for ascertainment can secure, through the good offices of a doctor, teacher or social worker, a more enlightened attitude in the home, it may not be necessary to decide upon a form of residential education.

MULTIPLE HANDICAPS

84. In recent years there has been an increase in the number of children with multiple handicaps, for example, visual handicap is increasingly occurring along with such other disabilities as partial deafness, physical defect and/or epilepsy. This arises, paradoxically enough, as a result of the growth of medical knowledge: many babies are now surviving—although possibly handicapped—who would formerly have died. Children with multiple handicap present a problem of considerable perplexity for those who are responsible for assessing their educational needs.

85. Provision for such children is inadequate but some types are satisfactorily dealt with under arrangements which already exist ; for example, if a child with visual handicap is also so severely mentally handicapped that he is unable to profit from education he may with advantage be placed for training in an occupational centre or, if insuitable for training of this kind, he may be reported to the local authority for care. Further, the Royal Blind School, Edinburgh, has an opportunity unit which caters for children who are not only blind but who suffer from other handicaps, mainly mental handicap. With such children the assessment made by that school itself might be decisive : where it is decided that child is too severely mentally handicapped to benefit from continued attendance at the unit he might be reported to the local authority, but where the Blind School consider that he can continue to profit from attendance there he might be allowed to do so. Cases of double or multiple handicap are diverse in their types but consideration should be given to the question of whether some of the types are sufficiently common to justify the provision of special units in Scotland, either by themselves or in association with other special schools. For the rarer types, provision may be possible only on a United Kingdom basis.

86. A difficulty which will confront an ascertainment team is to decide, where two handicaps are present, the school to which the pupil should be sent. It is extremely difficult to generalise but we suggest that where partial hearing is associated with partial sightedness the child is possibly more likely to benefit from attendance at a school for the partially hearing than at a school for the partially sighted. In many cases of double or multiple handicap an element of trial and error is inevitable so that reassessment at intervals is particularly important.

87. There is a further point of some importance which we wish to touch upon. A child may suffer from two or more disabilities but not seriously enough to be ascertained as handicapped in respect of any one of them. Nevertheless, when his full condition and circumstances are considered it may be thought that his education would prosper better in a special school than in an ordinary school ; in fact his admission to a special school may be the only way in which an education authority can properly fulfil their statutory duty of educating him in accordance with his age, aptitude and ability.

88. In such a case the authority may take the view that two obstacles at present prevent them from sending the pupil concerned to a special school. First, they may consider that he does not suffer in sufficient degree from any one of the handicaps listed in the Special Educational Treatment (Scotland) Regulations 1954, to enable them properly to ascertain him; and second, unless he is ascertained, he should not be sent, under present arrangements, to a special school. We therefore consider that the present statutory position should be reviewed in order that doubts may be removed and that the admission to special schools or classes of children who definitely require special educational treatment because of double or multiple handicap may be regularised. Probably the best solution would be to list in the Regulations an additional category of children requiring special educational treatment, namely, those who suffer sufficiently seriously from a combination of two or more disabilities to render them incapable of making adequate progress in an ordinary school. At the same time we emphasise that every child should remain in an ordinary school unless the reasons for transferring him to a special school are compelling.

REASSESSMENT

89. In view of the difficulty of assessing the standard of vision of a young child, any tentative results obtained when he enters school should be reviewed later. Similarly, prognosis in many eye conditions is so uncertain that reviews are necessary. For these reasons we *recommend* that the assessment of the child should not be regarded in any way as final but that arrangements should be made for review at appropriate intervals. In so recommending we emphasise two points :

- (*a*) There should be no hesitation in transferring a pupil to a different form of education if, after careful reassessment, a change is likely to enable him to make better educational progress ; and
- (*b*) Assessment or reassessment should take into account the child's sight at the time of testing and not what it might become in the future.

CHAPTER VI

Ascertainment Procedure

90. Previous reports of working parties on the ascertainment of handicap have all stressed the need for early ascertainment and this is no less true of visual handicap. Unless steps are taken when the child is young to encourage him in his movements and to minimise frustrations to which the handicap may give rise, he is less likely to attain the full development of which he is capable.

91. The presence of blindness or severe visual handicap in an infant may be discovered at birth or suspected subsequently by the parent, the health visitor or the family doctor. In whatever way such defect is discovered, presumably the child will then be examined by an ophthalmologist whose first concern will be to discover whether the defect can be remedied or diminished by medical treatment and he will initiate such treatment as he may consider necessary.

92. The ophthalmologist (who may or may not be associated with the educational service) will then make up his mind whether the child is blind, partially sighted or within the " normal " group, and we hope that in the future he will do so on the basis of the " educational " criteria set out in Chapter V. According to present procedures, he may at this stage complete the official form B.P.1 which is used for registering the child as blind or partially sighted. The criteria employed for registration differ from our educational criteria : a child may be registered as blind even although his near vision is good enough to enable him to be regarded as partially sighted from the educational point of view. We have already referred in paragraph 35 to the difficulties and contradictions which may arise under the two sets of criteria, and we *recommend* (as stated in paragraph 36) that the departments concerned should accept, for registration under the National Assistance Act 1948 of persons under the age of 15, the criteria which we have put forward in Chapter V.

93. The purpose of registration (as distinct from ascertainment) is to make the child eligible for the various benefits which the blind person or person with very serious visual handicap may receive under existing welfare arrangements. Lest any change in the criteria of visual assessment should deprive a person of these benefits we suggest that such change might be accompanied by appropriate conservation clauses.

94. As it is important that the seriously handicapped child should be given educational help as soon as possible, the ophthalmologist who first finds that a child is handicapped should report his finding not only to the family doctor but also to the education authority concerned in order that any necessary educational action may be taken.

The Ascertainment Team

95. We have already expressed the view that in assessing the educational needs of the visually handicapped child, his sight, physical condition, intelligence and social and emotional disposition and home environment should all be considered. We therefore *recommend* that a professional group—the ascertainment team—should undertake the work on which ascertainment will depend.

96. The extent to which education authorities may be expected to set up ascertainment teams is limited, as few are directly concerned in the education of visually handicapped children : Glasgow is the only education authority which has a school for the blind—St. Vincent's School—and only the education authorities of the more populous areas, Aberdeen, Dundee, Edinburgh, Glasgow, Dunbartonshire, Lanarkshire, Renfrewshire and Stirlingshire have special schools or classes for partially sighted children. (The largest school for the blind—the Royal Blind School, Edinburgh—is a grant-aided voluntary school.) In view of these facts and since the number of children who are likely to be involved in this assessment procedure is small, it is unrealistic to expect each of the 35 education authorities in Scotland to have an assessment team of the kind recommended. While no doubt each education authority will consider what form their ascertainment arrangements should take, we ourselves *recommend* that teams need be set up only by the education authorities of Edinburgh and Glasgow and that each of these should not only be responsible for the assessment of the educational needs of children in its own area but also be available for consultation by any authority in the country.

97. The permanent members of the ascertainment team should be an ophthalmologist, a school medical officer, an educational psychologist and a teacher either of the blind or of the partially sighted as appropriate They should take into full account reports from any paediatrician, or any other medical specialist who may have been consulted, from any teachers who have taught the child and from any health visitors, social workers or welfare officers who may be acquainted with the home and the family circumstances.

98. When a child in Edinburgh or Glasgow is reported to the education authority as having visual handicap his ascertainment for educational purposes should present no problem since, under the arrangements envisaged, an ascertainment team will be locally available. When a case is reported to any other authority, that authority should arrange for their medical and educational advisers to examine the child and the papers including the reports from any specialist should be sent to the authority in Edinburgh or Glasgow as the case may be. The team should then make an assessment of the case papers and supplement this, where they consider it necessary, by their own examination of the child. The team should consult with the ophthalmologist who first examined the child if they find themselves in disagreement with him. The findings of the ascertainment team should then be reported to the home authority and the team should ensure that any consultant who has dealt with the case should be informed of their recommendations.

Admission to School

99. Where the team come to the conclusion that a place should be sought for a child in the Royal Blind School or St. Vincent's School, Glasgow, it is clearly desirable that they consult with the head teacher of the School and with the School's ophthalmologist before putting their recommendation forward to the education authority concerned.

100. All young children who have been found by an ophthalmologist to be clearly blind should be examined as soon as practicable after the age of two years by the ascertainment team to assess their suitability for admission to the nursery department in a school for the blind. As attendance at a nursery department will frequently involve the child in leaving home and residing in the school, many parents will not agree to such a placement and we would not suggest that any child should be compulsorily enrolled in a nursery unit for the blind ; indeed we are doubtful whether education authorities have legal powers of compulsion in this matter. It may be, however, that an assessment of the child's environmental and developmental position will indicate that attendance at a nursery school is urgently desirable in the child's interest and, in these circumstances, an attempt should be made by the ascertainment team to persuade the parents to agree to nursery school education. It has been impressed upon us by some of our witnesses that one of the best ways to overcome parental opposition is to invite them to a residential school where they can see for themselves how happy the children are.

Screening

101. By the time the child reaches school age any severe visual handicap which has been present since birth or which has developed during infancy should have already been detected and brought to the attention of the appropriate

ascertainment team There will, however, be cases of visual defect ranging from the kind which needs only minor correction to serious degrees of partial sightedness which will be unknown to the education authorities at the time of school entry and these must be discovered.

102 In Department of Health for Scotland Circular No. 43/1957 of 12th June 1957, education authorities were asked to carry out an examination for the discovery of eye defects in all children aged 5 years, and we understand that most education authorities now do so. Whoever does the screening, any cases of visual defect suspected at the preliminary examination should be referred to the school medical officer himself who should then consider whether there is a possible need for special educational treatment and if so he should refer the case to the ascertainment team to determine what kind of education is appropriate.

103. Screening at age 5 is not by itself sufficient. We *recommend* that all children should be further screened three or four times in the course of their school careers. Such rescreening will help to prevent eye defects from going undetected and will bring to the notice of the ascertainment team any pupil who has been found to need their attention. We hope, however, that despite the institution of regular screening, teachers will continue to be vigilant in reporting to the school medical officer any pupil who appears to have defective vision.

104. Earlier in this report we referred to the extreme difficulty in forecasting the progress of an eye defect and it is essential therefore that all children who are receiving special educational treatment in a school for the blind or in a school for the partially sighted should be reassessed at least every two years. Children attending the Royal Blind School already as a matter of routine are examined at least once a year by the School's own ophthalmologist. In this case, or in any other school which has its own regular ophthalmologist, it will generally be sufficient if the ophthalmologist's report is sent to the medical officer for the education authority concerned for transmission to the appropriate ascertainment team, who will thus be able to maintain an interest in and, where necessary, to advise on any educational change that may be necessary.

CHAPTER VII

Incidence and Provision

INCIDENCE

105. It may reasonably be expected that a committee engaged on the subject of ascertainment should give some authoritative Scottish figures for the incidence of blindness and of partial sightedness amongst school children. As the next paragraphs will show, it is not easy to put forward firm figures with assurance, but we do suggest figures which, in our view, should be good enough to provide administrators with a sound basis for their thinking and planning.

The Blind

106. We have already seen, in paragraph 44, that there are 169 blind children in Scottish schools.

107. The 1950 Report of the Advisory Council recommended that educational planning should proceed on the assumption that the incidence of blindness is approximately 0·25 per 1,000 of the school roll. This would suggest that, on the present population of pupils of school age of about 850,000, there would be some 212 blind children of school age. As, however, blind children normally remain at school to age 18 (not 15, which is the normal school leaving age), the estimate based on the Advisory Council's advice should be increased to about 270.

108. The discrepancy between the figures of 169 (the children actually in schools for the blind) and 270 (based on the Advisory Council's estimate) is considerable and requires consideration. When the Advisory Council made their estimate, they were presumably taking into account a considerable incidence arising from retrolental fibroplasia (see Glossary in Appendix III). Happily, this cause of blindness has been virtually eliminated. It therefore seems likely that the estimate made by the Advisory Council should now be reduced. Although we understand that the Royal Blind School in Edinburgh has sometimes had short waiting lists in recent years, we consider that, as pupils with retrolental fibroplasia pass beyond school age, existing schools for the blind will be adequate to meet Scotland's needs, which seem likely to continue to be for some 160-180 school places.

The Partially Sighted

109. We have already seen that about 190 pupils attend special schools for the partially sighted. In their 1950 Report, the Advisory Council suggested that the incidence of partial sightedness was possibly about 0·75 children per 1,000 of the school population. If this figure is correct then the number of children ascertained to be partially sighted should be of the order of 630. The very large discrepancy between the figures of 190 (the number of pupils actually in special schools for the partially sighted) and 630 requires examination.

110. Part of the discrepancy arises because the number of partially sighted children of school age will always be greater than the number in appropriate special schools. There is one perfectly sound reason for this: some partially sighted children who suffer from the less severe degrees of the handicap may very properly be tried out in ordinary schools before they are assigned to special schools. There are, however, other reasons for the discrepancy. In the first place, the Advisory Council's estimate was likely to be inflated because at the time of the Report, the older theory of sight-saving was still held in some quarters. In addition to this the ascertainment of partially sighted children is far from complete in some areas, especially where the lack of appropriate special school facilities discourages the discovery of cases. In view of these difficulties we endeavoured to make estimates of our own.

111. We based our estimates on large centres of population, remembering however that some of these take pupils from neighbouring areas. In all our calculations we corrected for this geographical complication. Our first estimate was based upon a consideration of the position in Glasgow where, we have good reason to believe, the school population is tested with reasonable thoroughness so that the incidence of partial sightedness discovered there is likely to be a fairly close approximation to the true incidence for the city. Applying this figure proportionately to all Scotland, we attained our first result, which suggested that the

total number of partially sighted children in Scotland who should be in schools for the partially sighted is not more than 300. We based a second calculation on Edinburgh and a third on the other areas of Scotland where we had reason to believe that ascertainment was reasonably thorough and where the figures were not likely to be distorted through lack of adequate places in appropriate schools or classes. The second and third results closely confirmed the first. From these three results we *recommend* that, at the present stage of our knowledge and on the present standards of ascertainment, it should be assumed that the number of partially sighted children in Scotland for whom special provision should be made in schools or classes for the partially sighted may approach but will not exceed 300.

112. We wish to emphasise that we put forward this figure with a certain diffidence as we realise that our estimates have several possible sources of error. Our estimate will be too low if the comb-out of cases in Glasgow, Edinburgh and the other areas used as the bases of our calculations may not be so complete as we thought. On the other hand it may be too high since there is always the possibility that families which have a handicapped member may tend to gravitate to the larger centres where special medical and educational facilities exist, in which case Glasgow, Edinburgh and the other large centres may not be truly representative of the country as a whole. Our own emphasis on the importance of near vision may also have an effect, which cannot at present be expressed in numerical terms, upon ascertainment in the future. We must also emphasise that our figure relates to the number of children who ought to be in special schools for the partially sighted : it ignores partially sighted children who are properly assigned to ordinary schools and those who, for reasons of double or multiple handicap, would be more appropriately assigned to a school or to a form of training devised for non-visual handicaps.

113. When we bear in mind that many partially sighted children can make good progress in the infant classes of an ordinary school and so do not require to attend a special school until they are seven years of age, and also that, because of their handicap partially sighted children tend to be somewhat retarded and are not ready for secondary education until they are 12½-13½ years of age, we estimate that, of the 300 or so who should be in special schools or classes for the partially sighted, some 200 should be following primary courses and about 100 should be engaged in some form of secondary education.

PROVISION

The Blind

114. We consider, as pointed out in paragraph 108 above, that the number of places already provided in schools for the blind is adequate for the needs of the country. Accordingly, ascertainment is not likely to be influenced by lack of places. Furthermore, existing facilities make it possible for blind pupils to pursue the kind of secondary education for which they are best suited.

115. It is only at the pre-school stages that the blind child may lack the facilities which he may need in order to develop as fully as possible. Every effort should, therefore, be made to give him the advantage of attendance at a nursery school, if that is possible. We *recommend* that ordinary nursery schools should be prepared to take the occasional blind pupil and to give him the necessary care and attention.

116. We are well aware that a number of young blind children live far from a nursery school. For this reason we consider that the residential nursery unit at the Royal Blind School might be extended, if the demand warrants it, so that 6 or 8, or even 10 children could be provided for. We realise the difficulties of persuading parents to send very young children to a residential school, and we appreciate also the problems of such a school ; nevertheless we think that residence under conditions of controlled freedom for six months or a year could be of great value. We recognise that a school may find it necessary, before admitting a child, to insist on a reasonable degree of social training.

The Partially Sighted

117. The following points may be made concerning the present provision of education for partially sighted children :

- (*a*) There are only two schools of significant size, though neither is large. They are in Edinburgh and Glasgow. Both provide some secondary education but, although the facilities for such education in these schools are being improved, it cannot be claimed that either yet offers as wide a range of opportunity, especially in academic subjects, as is desirable.
- (*b*) Education authorities in areas of small population cannot be expected to set up schools for partially sighted children, as the number of pupils would not justify the schools. The result is that in such areas ascertainment tends to be incomplete, since the child has to be sent either to an ordinary school or to a school for the blind, neither of which is appropriate.
- (*c*) Some of our witnesses have stressed these deficiencies ; parents show disquiet and feel that their children cannot receive education according to their " age, ability and aptitude ". We appreciate their concern.

118. It may be questioned whether this Working Party, bearing in mind the precise terms of our remit, are justified in dealing in any detail with inadequacies of educational provision or with suggestions for its improvement. But so long as inadequate provision discourages or distorts ascertainment we feel that the subject is not irrelevant to our problems.

119. Normally the partially sighted child has sufficient vision to learn to walk, to run and to play and so his early development is less handicapped than that of the blind youngster. Thus, education in a nursery school may not be essential for a partially sighted child ; it is nevertheless desirable since he learns the give-and-take of association with other children in a way which may not be possible in his own home. For this reason, the parents of the pre-school partially sighted child should be encouraged to enrol him at a nursery school ; and the nursery school should be prepared to accept him despite his handicap. It would certainly be a benefit to local children if additional small nursery units were established in association with schools for the partially sighted. Further, it would be for consideration whether one or two of these units might develop a residential section to deal with children from other areas who cannot otherwise receive the benefits of any form of nursery school education.

120. As we have already pointed out, if ascertainment were complete, there would probably be 200 partially sighted children receiving primary education in appropriate special schools or classes. The number in attendance at present

approaches 150 and if all those within reasonable travelling distance of existing schools and classes were ascertained and sent there (even into the area of an adjoining authority), the existing schools could deal with perhaps 170 pupils. Even then, however, it would seem that some 30 pupils would reside too far from existing schools to attend them. This would indicate that residential accommodation for these pupils should be provided at a residential unit or units at, or in connection with, existing schools, or at some new centre. We *recommend* that two units should be provided—gradually, as demand develops—at, or in connection with, Kelvin School, Glasgow, and Kaimes School, Edinburgh. Alternatively all the provision required might be made at one or other of these schools. Our selection of these schools arises because we consider that these schools could, with great advantage, be built up to a size which would enable viable primary and secondary courses to be established.

121. If our estimates are correct, the total secondary roll of the partially sighted schools in Scotland will rise, when ascertainment is complete, to about 100. We *recommend* that all of these pupils should be centralised at two schools—those in Edinburgh and Glasgow. Each of these schools should provide secondary courses leading to a range, though not necessarily a full range, of Ordinary grade presentations in the Scottish Certificate of Education. It would not be economically feasible, however, for both to provide academic courses leading to Higher grade presentations.

122. We understand that Glasgow Education Authority have for some time been considering the establishment of a secondary school for physically handicapped pupils, including those of high and fairly high academic ability, and that it might take children from all over Scotland. We see no reason why this school should not be used as the secondary school for academically gifted pupils with visual handicap, provided that children with different handicaps received instruction appropriate to their needs. As we envisage it, the Edinburgh and Glasgow schools for the partially sighted would provide secondary education for the great majority of such pupils but would transfer their ablest pupils at age 12 or thereby to the academic school in Glasgow and would transfer any other pupils there at a later stage, if their school progress indicated that their educational needs would be best served at a school providing courses leading to Higher grade presentation.

Linkages with schools for other handicaps

123. The last paragraph raises questions about the advisability of mixing in one school children with different handicaps. After considering points made to us by our witnesses we *recommend* that in future there should be no combination within one special school of groups of handicapped children where the educational approaches are so dissimilar and the attitudes of the public, including the parents, are such that the combinations are inexpedient. On the other hand we see no objection to having within one school partially sighted pupils and physically handicapped pupils suffering, for example, from debility or heart conditions.

124. We do not favour an arrangement where the education of partially sighted children and of blind children is linked in one school. In Chapter I we have made it clear that partially sighted pupils are much more akin to normally sighted persons than to the blind, and we consider that the education of the blind

and partially sighted should be separately pursued. It is sometimes argued that where the blind and partially sighted are mixed, the blind gain from the help which the partially sighted may give them and the partially sighted are taught to be co-operative, helpful and kind by being encouraged to aid their blind colleagues. We regard this argument as one-sided. Both groups are in special schools to be helped and it seems basically unsound to promote an arrangement where one group is deliberately to be used to help the other.

125. We see no objection to the linkage of a school for the partially sighted with an ordinary school, especially so far as secondary education is concerned, provided that the physical education of the groups is kept separate and that the handicap of the partially sighted is kept in mind in other lessons. On the contrary, we believe that some advantages would accrue and certain economies of staffing and premises be achieved if the secondary department of a school for the partially sighted were linked to the secondary department of an ordinary school. Moreover, the partially sighted pupils would derive social and educational benefit from being eligible to join in some of the extra-curricular activities of an ordinary school.

CHAPTER VIII

Employment Problems

126. In an earlier chapter we have stressed the importance of a handicapped child's first ascertainment but have also emphasised the importance of reassessment at intervals, so that the pupil's education may be redirected, if that should prove to be necessary. The last reassessment generally takes place during the child's last year of attendance at school, by which time the pupil, his parents and the school will have been giving thought to his vocational future, It is at this stage, too, that certification or registration on official form B.P.1 will become imperative ; it is on the pupil's classification on this form that his future under the public welfare and vocational services will largely depend.

127. This reassessment of the pupil's handicap and the consequences for employment which flow from it are of importance to the school, as the instruction in the pupil's final year may be influenced (if it has not been influenced earlier) by vocational possibilities or opportunities. When we bear in mind the specific terms of our remit, it is possibly true that our interests, as a Working Party, end at this point, and that it is not strictly within our province to concern ourselves with post-school vocational guidance and with employment. Nevertheless, some of our own members and some of our witnesses, from their own experience of visually handicapped pupils, have formed opinions on some aspects of vocational help which it may be useful to report.

128. The pupil who is classified in Category 1 on form B.P.1 (see paragraphs 34 and 92 and Appendix IV) is either blind or so seriously handicapped in vision as to be regarded as blind for occupational purposes. There is obviously for him only a limited scope of vocational opportunities. The residual vision of the pupil who is classified as partially sighted, Category 2 on form B.P.1, would appear to fit him for a wider range of choice of work, but in fact this does not always prove to be the case.

129. On leaving school the pupil, whether blind or partially sighted, may register as a disabled person under the Disabled Persons Act, which aims at securing that such persons have increased opportunity of gaining employment. The Act compels the larger industrial and commercial concerns to seek to employ a certain percentage of disabled persons. Further, the Department of Employment and Productivity employ Disablement Resettlement Officers who help the disabled persons to find jobs, and pupils about to leave should be carefully advised about the help that is available to them. It is not, however, compulsory for a handicapped pupil to register as disabled. Most of the blind do so as they are aware of the advantages ; some of the partially sighted do not register, however, as they think that registration advertises their handicap and may in fact deprive them of opportunities of work in some fields where they think that ordinary persons with spectacles are acceptable but where disabled applicants are not.

130. On leaving school all handicapped pupils are accorded the help of the Youth Employment Service. Vacancies of a kind suited to their educational attainments and physical condition are brought to their notice. The Youth Employment Service deals with all school leavers, and is not geared, except in a general common-sense way, to the help of pupils who suffer from specific handicaps. Help of a more specialised kind than is provided by the Disablement Resettlement Officers is often necessary and, as will be evident in the following paragraphs, this is available.

The Blind

131. To give specialised help to the blind, the Department of Employment and Productivity have Blind Persons Resettlement Officers. These officers go round factories and workshops to discover all the jobs which the blind, perhaps with special training, could do. Not infrequently they find a job which is beyond the powers of the blind to undertake but which, with some modification of method or of a machine, could be brought within their powers ; and often enough the firm concerned agrees to make the necessary modification. Thus these officers find out work which the blind can do. They then try to place the school leavers in posts, or seek to train them for posts that are available.

132. The blind pupil on leaving school may have the ability and general education which fits him for a technical post, but he may lack the technical training in a particular skill which would enable him to undertake it. For this reason, the Department of Employment and Productivity have established training courses to train the blind in the skills which particular jobs require.

133. The Department of Employment and Productivity and the Welfare Departments do most creditable work in maintaining contact with blind persons throughout their lives, providing assistance when it is needed, in accordance with the relevant Acts of Parliament. It may, therefore, be said, by way of summary, that provision for the blind is humane, understanding and reasonably comprehensive. Despite this, some blind persons, particularly if they are well educated (possibly to universtiy degree standard), suffer from serious vocational disappointments and frustrations through not getting posts for which they regard themselves as qualified. Their inability to get posts is no fault of their own ; but neither is it necessarily the fault of employers, as it is obvious that the professionally

qualified person with sight must have a very real advantage compared with the similarly qualified blind person.

The Partially Sighted

134. It has frequently been remarked at our meetings that the comprehensive services which are available for the blind from the time when they seek employment are not available on the same scale for the partially sighted. Accordingly it has been stated by some of our witnesses that, while the partially sighted are less handicapped than the blind and therefore more easily employable, they are on the whole less satisfactorily employed and that many quite capable hardworking partially sighted persons drift along from post to post, unable (because help is inadequate) to find a really suitable niche.

135. The reasons why the employment position of the partially sighted person may be relatively unsatisfactory are that, unless he is placed in Category 1 on form B.P.1 (that is to say, unless he is classified with the blind) he may suffer because :

(*a*) The help of the general public, including employers, is more readily evoked for the blind than for the partially sighted.

(*b*) Blind persons normally register as disabled persons but only some of the partially sighted do so (see paragraph 129 above).

(*c*) There is no agency doing the work of job-analysis (corresponding to that done by the Blind Persons Resettlement Officers) to see what jobs (perhaps slightly modified) exist in the neighbourhood for partially sighted persons.

(*d*) Although there are general training facilities for the handicapped there are none specifically for the partially sighted which would enable them to acquire the skills which particular jobs require. To quote one example: training in the use of a braille-micrometer would enable the partially sighted person to undertake forms of employment which are open to the blind but beyond his reach.

136. It is clearly not in our province to make recommendations in these fields, but it would be our hope that our views on these matters be brought to the attention of the Department of Employment and Productivity so that they may consider whether and how far their services for the partially sighted could or should be improved.

137. The schools for the partially sighted, rightly, make the maximum use of the pupils' residual sight but from the evidence put before us, we consider that they might do more to prepare their pupils for a range of jobs for which touch is important.

138. We certainly *recommend* that the careful assessments made by the ascertainment team, and brought up-to-date when the pupil is about 15 years of age, should not be lost when the pupil leaves school. A copy of the detailed record of ophthalmic measurements, of psychological characteristics and of educational progress, but omitting any private or personal medical details, should be passed to those concerned with vocational training and placement, in order that a valuable record, built up with skill over the years, should be put to maximum use.

CHAPTER IX

Miscellaneous Matters

Equipment

139. In our discussions on the selection of children requiring education in schools for the partially sighted our attention was frequently drawn to the question of special visual aids for these children. These may take the forms of special standards of illumination, specially printed reading material and corrective aids. The ascertainment team will require to pay heed to these matters as the proper placement of a child will depend upon the educational use which he can make of his vision when it is given all the artificial aid possible.

Illumination

140. The standard unit of illumination is the lumen per square foot which is 1/12th of the light given by a standard candle, and a good average value for outdoor illumination is 500 lumens per square foot. The proportion of the outdoor illumination which a point indoors receives is called the Daylight Factor which in the centre of a very brightly lit room would be about 6-10 per cent. The normal recommended lighting standard for ordinary schools is about 10 lumens per square foot or 2 per cent in those parts of the rooms farthest from the windows, but schools for partially sighted children should have a standard about two or three times as great, i.e., 20-30 lumens per square foot or 4-6 per cent Daylight Factor. This should be provided by good general lighting rather than very brilliant local lighting which can produce a glare effect which would be to the discomfort of the pupils.

Reading Material

141. A very wide range of print sizes is used in the printing of various kinds of reading matter ranging from the 6 point print of a telephone directory and 8 point for most newspaper print to 48 point for banner headlines. Partially sighted children can read down to N. 24 and most can read to N. 18, and so can read the kind of books used at the primary stage. The books used in secondary schools, however, are produced in 14 point or even 12 point which are rather too small for most partially sighted children.

142. Before the last war, attitudes to reading were somewhat coloured by the now discredited "sight-saving" theory for myopic children. Although some valuable research into the legibility of print was carried out in the 1930s by such bodies as the Royal National Institute for the Blind, it is in the last few years that there has been most interest in this subject, arising from developments in printing technology and from the change in attitude towards the use of residual vision.

143. Some publishers already produce reading material in large print but this is not designed specifically for classroom work. A few large education authorities have been able to make use of their own resources, e.g., in colleges of further education, to reproduce text books in large print, and to enlarge, by photo-

copying, diagrams and maps for use in local schools. We express the hope that large authorities will continue to develop services of this kind as a means of helping not only their own schools but also those of smaller authorities. In their experimental work we hope that they will take into account the views of teachers of the partially sighted as to the kind of books which are most required.

144. We wish it to be clear that we are not advocating that *all* partially sighted children should necessarily be provided with specially printed books at all stages of their schooling. There is a divergence of opinion among teachers on the value of large print books. Some believe that partially sighted children should be encouraged to accustom themselves as far as possible to normal conditions; others think that they should be given the maximum help through enlarged print. In these circumstances it is important that research be continued and that education authorities keep abreast of expert opinion as it develops.

Corrective Aids

145. Some children with visual handicap can be greatly helped in their reading by the use of some form of corrective aid, the most common example being spectacles (see Chapter IV).

146. Apart from spectacles the main corrective aids at present available are:

(*a*) *Large reading lenses*

The pupil who uses one of these looks through it with both his eyes. As it is mounted on a stand with a solid base, his hands are free. A simple lens magnifies 5 times and gives the pupil a field of vision the width of an average page and half its length. Some have built-in illumination. Compound lenses are also available which can magnify up to 20 times.

(*b*) *Portable reading lenses*

These are not so effective as mounted lenses but they are portable and less obtrusive.

(*c*) *Binocular loupes*

These lenses sit in front of the child's spectacles. They are cheap and portable and can magnify up to 2 times. It has been observed, however, that despite their apparent advantages, children show no particular preference for them as against other magnifying lenses.

(*d*) *Lederer lenses*

These are high powered glass spherical lenses worn close to the eye in a spectacle frame. The field of vision is small (up to six letters according to the size of the print) and the working distance is between 2 and 4 inches. They can be used with one eye only. They magnify 3, 4 or 5 times.

(*e*) *Aspheric plastic lenses*

These are produced giving magnification of 4, 6 and 8 times.

(*f*) *Low vision aids*

These are aids using compound lenses based on the principles of the telescope. These can upset the user's estimation of distance and are unlikely to be suitable for outdoor use. They can be useful in the classroom; for near vision these aids can give up to 6 times magnification and enable the child to hold print further away. They can occasionally be used by both eyes together, but most children prefer to use one eye only. A variety of compound magnifiers are available giving different magnifications ranging from 8 times to 20 times.

147. Again we found a wide variety of opinions on the use of magnifying aids in the school. Most schools have them but it is not uncommon to find that they are hardly ever used. We are in no doubt, however, that schools should experiment in the use of magnifying aids and should carefully assess the benefits which the children appear to derive from the use of particular aids. We must, however, stress that instruction in the use of individual aids in each particular case is essential. Any experiment with aids should be undertaken only after full consultation with the ophthalmologist, and we *recommend* that the evaluation of experiments in the use of magnifying aids should be one of the functions of the two ascertainment teams which we have recommended in Chapter VI.

CHAPTER X

Summary

148. In this Chapter we provide a summary of the main recommendations, observations and advice which we have set out in the course of the above Report. Those points to which we attach particular importance are printed in heavy type.

The Background

(*1*) The ascertainment of partially sighted children should be achieved at as early a stage in their school career as is educationally necessary *paragraphs 22 and 23*).

The Main Problems

(*2*) Ascertainment of visually handicapped pupils involves classification into three groups—(*a*) those who require to be educated in a school for the blind, (*b*) those who require to be educated in a school for the partially sighted and (*c*) those who can be educated in an ordinary school. This implies defining the two frontiers separating these three categories (*paragraph 25*).

(*3*) The professional assessment of the child involves consideration not only of his vision but also of his general health, intelligence, personality and home background (*paragraph 27*).

(*4*) **The conclusion reached by the professional specialists can go forward to the education authority only as a recommendation. Ascertainment itself is a decision of the education authority under the Education (Scotland) Act 1962 (paragraph 28).**

(*5*) To improve educational statistics, there should be recorded in respect of each pupil assessed (*a*) the type of education for which he is best suited and (*b*) the type of education to which he is assigned (*paragraph 30*).

(*6*) The special difficulties of areas of sparse population in providing education for visually handicapped children must be fully recognised (*paragraph 32*).

(*7*) So long as the child is under 15 years of age, the criteria appropriate to education given in Chapter V should be operated both for the purpose of educational ascertainment and of registration under the welfare service (paragraps 34 to 36).

The Present Educational Position

(*8*) The definition of " partially sighted pupils " in the Special Educational Treatment (Scotland) Regulations 1954 should be amended (paragraph 41).

(*9*) While a satisfactory range of secondary courses is provided for blind pupils, there is a need for fuller provision of secondary education, particularly of an academic kind, for the partially sighted (*paragraph 46*).

Medical Background

(*10*) The ways in which the efficiency of the eye may be reduced may be classified under three headings—blurring of vision ; loss of central vision ; and loss of visual field. These categories are discussed (*paragraphs 48 to 54*).

(*11*) The experts are now agreed that the use of the eye for close work or for any other normal purpose can have no ill effect whatsoever even in the case of a child with myopia (*paragraph 56*).

(*12*) Physical activities of partially sighted children need be restricted only rarely and then solely in order to protect the eye from injury ; but boxing should be forbidden as a dangerous sport (*paragraph 56*).

(*13*) The majority of children now attending schools for the blind and partially sighted suffer from congenital or hereditary defects (*paragraph 57*).

(*14*) The most generally accepted standards of vision are those provided by the Snellen Test, which is described (*paragraph 58*).

(*15*) Tests designed for young children have now been collected in the STYCAR set of tests (*paragraph 62*).

(*16*) Research in regard to the testing of vision, especially the near vision, of young children should be pursued (*paragraph 63*).

(*17*) Only in a very limited number of cases can the ophthalmologist forecast with accuracy whether a child's sight will deteriorate and, if so, how fast (*paragraph 64*).

(*18*) Before the need for special educational provision for a child is considered, his eyes should be examined by an ophthalmologist and a record made of the best standard of vision obtainable with suitable spectacles (*paragraph 66*).

(*19*) Partially sighted children should be provided with two pairs of spectacles and ophthalmologists should have discretion to prescribe two pairs for other children who would be seriously handicapped without glasses. The standard school frames should be made stronger and more attractive (*paragraph 67*).

The Criteria of Ascertainment

(*20*) The present criteria for assessing visual handicap under the National Assistance Act 1948 were set out in appendices to the Department of Health for Scotland Circulars No. 71 of 24th November 1954 and No. 51 of 23rd September 1955 (*paragraph 74 and Appendix IV*).

(*21*) The critical question in distinguishing between blindness and partial sight is whether the child has sufficient sight to be of educational use. Subject to the results of other tests a child with a Snellen rating below 3/60 should be regarded as blind, and of 6/60 or better should not be regarded as blind. Between these limits, very special care is required. A child should not be regarded as blind, for the purposes of education, if his near vision helped by spectacles enables him to read N. 18, however poor the Snellen result may be (paragraph 75).

(*22*) The child's field of vision must be separately examined as marked contraction increases the handicap (*paragraph 75*).

(*23*) Where the Snellen rating is 6/18 or worse in the better eye when helped by spectacles, the child should be considered for a school for the partially sighted, the final judgement depending on other than visual factors. Where the rating is 6/24 or worse, the presumption is strong that the child is unfit for ordinary schooling (*paragraph 76*).

(*24*) The non-visual factors which may be very relevant in assessing a child are age and maturity, school progress, intelligence and the ability to learn, emotional and social disposition and home environment (*paragraphs 77 to 83*).

(*25*) Consideration should be given to whether certain kinds of multiple handicap are sufficiently common to justify a special unit in Scotland. For rarer types, provision should be considered on a United Kingdom basis (paragraph 85).

(*26*) The statutory position should be reviewed in order that the admission to special schools of children who require special education because of double or multiple partial handicap may be regularised. The solution may be to list an additional category of handicapped child in the Special Educational Treatment (Scotland) Regulations 1954 (*paragraph 88*).

(*27*) Any assessment should be reviewed at appropriate intervals. There should be no hesitation in transferring a pupil to a different form of education if a change is likely to enable him to make better educational progress ; and assessment or reassessment should take into account the child's sight at the time of testing and not what it might become in the future (*paragraph 89*).

Ascertainment Procedure

(*28*) The ophthalmologist who first examines a child suspected of visual handicap should be encouraged to adopt educational criteria of classification. If he finds that the child is handicapped he should report his findings to the family doctor and the education authority (*paragraphs 91, 92 and 94*).

(*29*) The criteria suggested in Chapter V should be accepted for registration under the National Assistance Act 1948 of persons under the age of 15 years. This change might be accompanied by appropriate conservation clauses so as not not to deprive any person of welfare benefits (*paragraphs 92 and 93*).

(*30*) Ascertainment teams should be set up by the Education Authorities of Edinburgh and Glasgow, each of which would be available for consultation by any other authority in the country (paragraph 96).

(*31*) The ascertainment team should comprise an ophthalmologist, a school medical officer, an educational psychologist and a teacher either of the blind or of the partially sighted as appropriate. It should take into account reports from other professional workers who may have been concerned with the child (*paragraph 97*).

(*32*) Where cases are reported to an authority which has no ascertainment team of its own, that authority should arrange for their advisers to examine the child and the papers should be sent for assessment to Edinburgh or Glasgow (*paragraph 98*).

(*33*) All blind children should be assessed as soon as practicable after the age of two years for their suitability for admission to the nursery department in a school for the blind (*paragraph 100*).

(*34*) All school children should be screened for visual handicap at least 4 times in the course of their school careers. Any cases of suspected visual defect should be reported to the school medical officer for consideration for referral to the ascertainment team (*paragraphs 102 and 103*).

(*35*) All children attending schools for the blind or for the partially sighted should be reassessed at least every two years (*paragraph 104*).

Incidence and Provision

(*36*) Existing schools for the blind are adequate to meet future needs (*paragraph 108*).

(*37*) It should be assumed that the number of partially sighted children in Scotland for whom provision should be made in special schools or classes will not exceed 300 (*paragraph 111*).

(*38*) Nursery schools should be prepared to take the occasional blind pupil (*paragraph 115*).

(*39*) The residential nursery unit at the Royal Blind School might be extended to provide for *6-10* children (*paragraph 116*).

(*40*) Pre-school partially sighted children should be enrolled in ordinary nursery schools. Additional nursery units might be established in association with schools for the partially sighted and the provision of residential facilities for children from other areas might be considered (*paragraph 119*).

(*41*) **For secondary education, partially sighted children should be centralised at the Edinburgh and Glasgow schools, each of which should provide a range of secondary courses. Residential facilities should be provided at these schools for children from other areas (paragraph 121).**

(*42*) **Partially sighted pupils should be eligible to attend the residential secondary school for physically handicapped children, including those of high academic ability. which Glasgow propose to provide (paragraph 122).**

(*43*) In future, there should be no combination within one special school of groups of handicapped children where the education approaches are so dissimilar and public attitude such that the combinations are inexpedient (*paragraph 123*).

(*44*) The education of blind and partially sighted children should be separately pursued (*paragraph 124*).

(*45*) There are some advantages in linking a school for the partially sighted with an ordinary school (*paragraph 125*).

Employment Problems

(*46*) The partially sighted are on the whole less satisfactorily employed than the blind and the Department of Employment and Productivity should consider whether and how far their services for the partially sighted could or should be improved (*paragraph 136*).

(*47*) Assessments by the ascertainment team should be brought up-to-date when a pupil is about 15 years of age and a copy of the appropriate records should be passed to those concerned with vocational training and placement (*paragraph 138*).

Miscellaneous Matters

(*48*) The proper placement of a child will depend on the educational use which he can make of his vision when it is given all the artificial aid possible (*paragraph 139*).

(*49*) School lighting should be provided by good general lighting rather than brilliant local lighting (*paragraph 140*).

(*50*) Various forms of corrective aids are described (*paragraph 146*).

(*51*) The evaluation of experiments in the use of magnifying aids should be one of the functions of the ascertainment teams (*paragraph 147*).

Acknowledgement

149. In conclusion we wish to record our appreciation of the help we have received from our secretary, Mr. A. W. M. Heggie, and our assistant secretary, Miss E. Rae. Mr. Heggie provided us with the statistics and other information which we required from the Scottish Education Department and other Government bodies ; he has advised us on a number of important questions ; he has corresponded with our witnesses and has helped substantially in the preparation of our Report. Miss Rae has drafted our minutes with care, and competently made arrangements for our visits to schools. We are very indebted to them both.

We have the honour to be, Sir,

Your obedient Servants,

(Signed) ALLAN G. RODGER (Chairman)
ISABELLA CAMPBELL
JAMES CORMACK
C. F. DRYSDALE
C. R. S. JACKSON
M. B. M. LUMGAIR
D. G. ROBERTSON
IAN A. G. ROSS
HENRY TAYLOR
BARBARA S. WATSON
T. S. WILSON
WILLIAM WILSON
J. G. MORRIS
J. A. WARD
A. W. M. HEGGIE (Secretary)

St. Andrew's House,
Edinburgh, 1.
22nd October 1968.

APPENDIX I

List of Organisations and Individual Persons who submitted Evidence

Note: Those marked with an asterisk gave written evidence only and those marked with a dagger gave oral evidence only ; the rest gave both written and oral evidence. Oral evidence on behalf of organisations was given by the representatives named.

A. ORGANISATIONS

*Association of Directors of Education in Scotland.

*Association of School Medical and Dental Officers of Scotland.

*British Medical Association (Scottish Office)

*Educational Institute of Scotland.

*Faculty of Ophthalmologists

Kaimes School for Partially Sighted Children Parent/Teacher Association—
  Mr. A. F. Aitkenhead.
  Mrs. J. Stewart.

Department of Employment and Productivity—Miss M. M. Cattenach (Disabled Persons Branch).
  Mrs. M. McMurdo (Youth Employment Service).
  Mr. W. M. B. Wallace (Blind Persons Resettlement Officer).

*National Bureau for Co-operation in Child Care.

National League of the Blind (Scottish District Council)—
  Mr. T. Watson.
  Mr. J. Watt.

*Scottish National Federation for the Welfare of the Blind.

*Society of Medical Officers of Health (Scottish Branch).

†Youth Employment Service—
  Mr. H. M. C. Galbraith (Principal Youth Employment Officer, Fife).
  Miss J. Stewart (Youth Employment Officer, Cowdenbeath, Fife).
  Mr. R. A. Paton (Principal Youth Employment Officer, Glasgow).
  Miss E. W. Thomson (Partick Area Youth Employment Officer, Glasgow).

B. INDIVIDUAL PERSONS

*Sister Aloysius, Headmistress, St. Vincent's School for Blind and Partially Sighted Children, Liverpool.

*Sister Angela Crews, Head Teacher, St. Vincent's School for Blind, Deaf or Partially Hearing Children (Tollcross), Glasgow.

*Mr. W. Cunliffe, Principal, Hethersett Centre for Blind Adolescents, Surrey.

*Miss W. E. Deavin, formerly H.M. Inspector of Schools, Department of Education and Science.

*Miss Norah L. Gibbs, Psychologist, London.

*Mrs. Joan Kell, Headmistress, John Aird School for Partially Sighted Children, London.

Dr. Hector J. McPherson, O.B.E., Royal Infirmary of Edinburgh.

*Mr. G. H. Marshall, Headmaster, Exhall Grange School for Partially Sighted Children, Coventry.

*Dr. Eleanor B. Petrie, Royal Infirmary of Edinburgh.

*Sister Barbara Quilty, St. Vincent's School for Blind, Deaf or Partially Hearing Children (Tollcross), Glasgow.

*Miss Alison Shaw, Library Association, London.

Dr. N. L. Stokoe, Consultant Ophthalmologist, Royal Infirmary of Edinburgh.

APPENDIX II

List of Schools visited by Members of the Working Party

A. SCOTLAND

Edinburgh —Royal Blind School.
Glasgow —Kelvin School for Partially Sighted Children.

B. ENGLAND

Birmingham—George Auden School for Partially Sighted Pupils.
—Priestley Smith School for Partially Sighted Pupils.
Coventry —Exhall Grange School for Partially Sighted Pupils.
Exeter —West of England School for Partially Sighted Children.
Liverpool —St. Vincent's School for Blind and Partially Sighted.
London —John Aird School for Partially Sighted Pupils.

APPENDIX III

Glossary of Ophthalmic Terms Used in the Report

Albinism	Deficient pigmentation of parts of the body including the eyes, often with concomitant visual defects.
Aphakia	Absence of the lens of the eye, usually following removal of cataract.
Astigmatism	Inequality of curvature of the cornea of the eye causing distortion of the image seen. Most commonly the surface of the cornea is flatter from side to side than from above downwards. Astigmatism can usually be corrected by spectacles.
Buphthalmos	Congenital glaucoma, a disturbance of the circulation in the eye.
Cataract	Any opacity in the lens of the eye is technically a cataract. The resultant degree of visual defect depends upon the position and density of the opacity.
Choroiditis	Inflammation of tissues at the back of the eye. If the resulting scar affects the central part of the retina, vision is often defective.
Dioptre	A measure of the strength of a spectacle lens. The stronger lenses have a larger dioptre number.
Glaucoma	A disturbance of the circulation of fluid within the eye. The congenital form is known as buphthalmos.
Hemianopia	Loss of half of the field of vision.
Keratitis	Inflammation of the cornea, causing opacity through scarring. The degree of visual defect depends on the extent and density of the opacity.
Myopia	Short sight.
Nystagmus	Constant involuntary movements of the eyes.
Ophthalmia Neonatorum	Infection of the eyes of an infant.
Optic atrophy	As a result of any one of a number of causes (inflammation, injury, cerebral tumour, etc.), the optic nerve may fail adequately to conduct impulses from the eye to the brain, with resultant visual loss.
Retinitis pigmentosa	A hereditary degenerative condition of the retina, leading to increasing blindness developing at an unpredictable rate.
Retrolental fibroplasia	A disease of premature infants which caused a large " bulge" in the numbers of blind children in the early 1950s. This disease is now virtually non-existent.
Toxoplasmosis	An infectious disease causing scarring at the back of the eye
Visual acuity	Estimation of—see section on medical aspects of vision.

APPENDIX IV

Appendix to D. H. S.
Circular No. 71/1954

Criteria for determining whether or not a person is blind

1. *Definition of blindness:* The statutory definition for the purposes of registration as a blind person under the National Assistance Act, 1948, is that the person is " so blind as to be unable to perform any work for which eyesight is essential." In considering this matter there are two important points to be noticed, viz :

(i) The test is not whether the person is unable to pursue his ordinary occupation, or any particular occupation, but whether he is too blind to perform *any work* for which eyesight is essential ; and no account should be taken of availability of employment.

(ii) Only the visual conditions are to be taken into account ; other bodily or mental infirmities are to be disregarded.

2. *General.* The principal condition to be considered is the visual acuity (i.e., the best direct vision obtainable with each eye separately or both together, where both are present, as tested by Snellen's type *with focus properly corrected*), but regard must also be paid to the other conditions set out below.

3. *Visual criteria:* The persons examined may be classified in three groups, as follows :

Group 1—*Below* 3/60 *Snellen*

In general a person with visual acuity below 3/60 Snellen may be regarded as blind. In many cases, however, it is desirable to test the vision at one metre and not to regard a person having acuity of 1/18 Snellen as blind unless there is also considerable restriction of the visual field or aphakia.

(*Note:* 1/18 indicates a slightly better acuity than 3/60, but as the standard test types provide a line of letters which an eye possessed of full acuity should read at 18 metres, there is some convenience in specifying 1/18.)

Group 2—3/60 *but below* 6/60 *Snellen*

A person with visual acuity of 3/60 but less than 6/60 Snellen :

(*a*) may be regarded as blind if the field of vision* is considerably contracted (although exceeding the limit of 10 degrees laid down in Group 3 below), or if aphakic, but

(*b*) should not be regarded as blind if the visual defect is of long standing and is unaccompanied by any material contraction of the field of vision, e.g., in cases of congenital nystagmus, albinism, myopia, etc.

Group 3—6/60 *Snellen or above*

A person with a visual acuity of 6/60 Snellen or better should ordinarily not be regarded as blind. He may, however, be regarded as blind if the field of vision is markedly contracted to 10 degrees or less from the fixation point

---

(* " Field of vision" means the combined field of vision of both eyes (where both are present), the test being the recognition of hand movements by the confrontation test, with the hand at a distance of one half metre from the applicant's face.)

in the greater part of its extent, and particularly if the contraction is in the lower part of the field ; but a person suffering from homonymous or bi-temporal hemianopia retaining central visual acuity of 6/18 or better is not to be regarded as blind.

Notes

(*a*) Whenever possible, the certification form should bear the signatures of two ophthalmic surgeons.

(*b*) The question whether a defect of vision is recent or of long standing has a special bearing on the certification of blindness. A person whose defect is recent is less able to adapt himself to his environment than is a person with the same visual acuity whose defect has been of long standing. This is specially applicable in relation to Groups 2 and 3.

(*c*) Another factor of importance, particularly in relation to Group 2, is the age of the person at the onset of blindness. An old person with a recent failure of sight cannot adapt himself so readily as can a younger person with the same defect.

(*d*) On rare occasions cases will arise which are not precisely covered by the foregoing observations, and such cases must be dealt with according to the judgement of the certifying ophthalmic surgeon.

The following additional notes are given for the guidance of ophthalmic surgeons in regard to completion of certain entries in the Medical Certificate

" Age at onset of eye trouble "

It is expected that the examiners will usually be able to obtain the " approximate age" of onset. Experience has shown that in many cases the statement volunteered by the patient cannot be accepted unreservedly, e.g., an elderly person with high myopia may say that his vision began to fail at the age of 50, but further questioning may elicit the fact that he has been short-sighted from childhood. Despite the absence of accuracy, an approximate age should be entered which would as nearly as possible assign the case to its proper age group as this may become of value when the entries are submitted to statistical analysis.

" Age at onset of blindness "

This too should be the surgeon's considered opinion based on the patient's statement and the clinical findings.

" Visual Acuity "

In cases where the surgeons are of opinion that the patient has a greater actual visual acuity than is admitted, the admitted visual acuity should be recorded with " admitted " in brackets after it and a footnote added to the certificate stating the surgeon's reasons for this qualification. The classified list of causes of eye defects in the medical certificate should in such cases be marked with (1) against the appropriate cause under item 570 and with (2) against any other cause found.

Causes of eye defects

In many cases it may be impossible to determine the cause of the eye defects, but for the purposes of statistical analysis some indication at least should be attempted. Provision is made for recording under the heading " Not classified owing to lack of data" in Section E. of the classified list the instances in which no such indication can be given. Advantage should, where possible, be taken of any hospital or private notes on a case, or of any school medical records.

Reg. No..................................... **B.P. 1**

CERTIFICATION OF PERSONS WHO ARE EITHER (1) SO BLIND AS TO BE UNABLE TO PERFORM ANY WORK FOR WHICH EYESIGHT IS ESSENTIAL,* OR (2) SUBSTANTIALLY AND PERMANENTLY HANDICAPPED BY DEFECTIVE VISION†

PARTICULARS OF PERSON AND FORM OF MEDICAL CERTIFICATE

Local Authority.................................... *Date of application*....................................

Name..

Address ....

....

Changes of Address..

....

....

PART I—PARTICULARS OF PERSON

1. Age.......... Date of Birth.................................... Sex....................
2. (i) Married (ii) Single (iii) Widowed
   (ring category applicable)
3. Position in household—(i) Head (ii) Member of family (iii) Lodger
   (ring category applicable)
4. Number of dependants and their relationship to person :—
   - (*a*) adults..
   - (*b*) children under 16...
5. Main occupation before vision began to fail.......................................
6. Nature of any other occupation before vision began to fail........................
7. (*a*) Nature of any work undertaken since vision failed.............................
   ....
   and, (*b*) whether work is still being carried on ....
8. Whether willing to undergo a course of technical training—
   and, if so, whether application already made to
   - (*a*) local authority ; ....
   - (*b*) education authority ; *or* ....
   - (*c*) Ministry of Labour ....
9. Whether receiving injury or disablement benefit under National Insurance (Industrial Injuries) Act, 1946 ....
10. Any other relevant information...
    ....
    ....
    ....
    ....

NOTES :

* This is the definition of blindness contained in section 64 (1) of the National Assistance Act, 1948.

† Under section 29 of the National Assistance Act, 1948, local authorities have power to make welfare arrangements for persons who are " blind . . . and . . . who are substantially and permanently handicapped by illness, injury, or congenital deformity . . . ." This classification is being regarded as covering persons who are substantially and permanently handicapped by congenitally defective vision or in whose case illness or injury has caused defective vision of a substantial and permanently handicapping character.

PART II—MEDICAL CERTIFICATE

EXAMINATION OF EYES

	RIGHT EYE	LEFT EYE
Visual acuity—		
(*a*) unaided		
(*b*) with correcting glasses		
(*c*) both eyes — best direct vision after correction	(also ring appropriate category—(1) less than 3/60 ; (2) less than 6/60 ; (3) less than 6/36 ; (4) less than 6/18 ; (5) 6/18 or more.)	
Field of vision (Ring category applicable)	1. Nil 2. Less than 10° 3. Contracted 4. Central scotoma 5. Hemianopia 6. Good	1. Nil 2. Less than 10° 3. Contracted 4. Central scotoma 5. Hemianopia 6. Good
Globe, orbit, muscles, tension, nystagmus, etc.		
Lids		
Cornea		
Iris and ciliary body		
Lens		
Vitreous		
Choroid		
Retina		
Optic Nerve		

DIAGNOSIS

Main ocular disease producing *blindness / substantial and permanent defect of vision	(1)	(1)
Complications and sequelae	(2)	(2)
Other ocular diseases	(3)	(3)
Cause of main ocular disease	(4)	(4)
Onset of eye trouble	Age	Age
Onset of (i) blindness*	Age	Age
or (ii) substantial and permanent defect of vision*	Age	Age

PROGNOSIS (Ring category applicable)

1. Irremediable. 2. Likely to deteriorate 3. Stationary 4. Likely to improve

HISTORY (Ring category applicable)

1. OPHTHALMIC TREATMENT—
    1. None
    2. Not amenable to treatment
    3. Treatment refused (including refusal to complete full course of treatment)
    4. Treatment accepted and still being given
    5. Treatment completed—successful
    6. Treatment completed—failed
    7. Not known
2. SIMILAR DEFECT IN PARENTS OR RELATIVES
    1. Not known 2. No 3. Yes
3. CONSANGUINITY OF PARENTS
    1. Not known 2. No Yes (state relationship)
4. ANTI-SYPHILITIC TREATMENT
    1. Not known 2. No 3. Yes

RECOMMENDATIONS (Ring category applicable)

1. IS TREATMENT OR CONTINUATION OF TREATMENT RECOMMENDED ?
    1. No 2. Medical 3. Surgical 4. Optical 5. Inadvisable on medical grounds
2. WOULD TREATMENT PROBABLY CURE OR PREVENT *BLINDNESS/DEFECT OF VISION ?
    1. No 2. Yes 3. Doubtful
3. IS RE-EXAMINATION NECESSARY, AND AFTER WHAT INTERVAL ?
    1. No 2. Yes Interval
4. In the event of the applicant being employable, can you indicate—
    (*a*) any activity considered unsuitable (*e.g.*, stooping, the lifting of heavy weights)
    (*b*) any activity that is particularly suitable (*e.g.*, a sitting job, possibly handling small material, for a glaucoma patient with small fields and good central vision)
    (*c*) if a change of present occupation is desirable . . . . . .

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* See NOTES at foot of first page of form B.P. 1.

EYE DEFECTS FOUND

(Ring category applicable)

	RIGHT EYE		LEFT EYE
CONGENITAL	000	Ptosis	000
	001	Aniridia	001
	002	Cataract	002
	003	Dislocated lens	003
	004	Nystagmus	004
	005	Amblyopia	005
	006	Buphthalmos	006
	007	Anophthalmos	007
	008	Microphthalmos	008
	009	Others	009
	010	Albinism	010
	020	Wounds of the eyeball	020
	030	Conjunctiva : Inflammatory diseases	030
	031	Conjunctiva : Essential shrinkage, etc.	031
	040	Lids and tear sac : Inflammatory diseases	040
	300	Lid paralysis	300
	050	Sclera : Inflammatory diseases	050
	060	Cornea : Ulcerative keratitis	060
	070	Cornea : Interstitial keratitis	070
	080	Cornea : Other diseases	080
	081	Corneal Dystrophies	081
	082	Cornea : Keratoconus	082
	090	Iridocyclitis	090
	091	Iritis	091
	100	Endophthalmitis, panophthalmitis	100
	101	Sympathetic ophthalmia	101
	102	Retrolental fibroplasia	102
	110	Retinopathy, exudative ; Neuro-retinopathy	110
	111	Tetinopathy, central exudative (disciform)	111
	120	Degenerative retinopathy : Retinitis pigmentosa, etc.	120
	121	Senile macular degeneration	121
	250	Intra-ocular haemorrhage	250
	251	Occlusion retinal artery	251
	252	Occlusion retinal vein	252
	253	Perivasculitis retinae : Eales' disease	253
	254	Other vascular diseases of the retina	254

RIGHT EYE		LEFT EYE
130	Detachment of retina	130
140	Choroidal atrophy—not myopic	140
141	Gyrate atrophy : Choroidoraemia	141
142	Central (macular) atrophy	142
150	Optic nerve atrophy and neuritis	150
160	Retrobulbar neuritis and toxic amblyopia	160
180	Tumour : ocular adnexa	180
190	Tumour : Intra-ocular, indeterminate	190
191	Choroidal tumour, primary	191
192	Choroidal tumour, secondary	192
193	Retinal tumour	193
200	Cataract—not congenital	200
210	Aphakia (surgical)	210
221	Dislocated lens	221
220	Other lens anomalies	220
230	Myopia	230
240	Normal eye and refractive errors, not myopia	240
260	Glaucoma, primary	260
280	Nystagmus	280
290	Cortical and tract lesions	290
310	Amblyopia ex anopsia (Amblyopia from squint)	310
311	Functional disturbances	311
170	Indeterminate conditions	170
320	Others	320

COMPLICATIONS

0	No complications	0
1	Corneal opacity or staphyloma	1
2	Occlusio, Seclusio	2
3	Secondary cataract	3
4	Detachment of the retina	4
5	Choroido-retinal disease	5
6	Optic nerve atrophy	6
7	Enucleated eye : Phthisis Bulbi	7
8	Secondary glaucoma	8
9	Others, including conjunctiva and blepharitis	9

CAUSES OF EYE DEFECTS

NOTES.—(*a*) Ring category (categories) applicable, indicating major cause by (1), and other cause, if any, by (2).
(*b*) Where cause is not specified in appropriate category insert particulars in blank bracket provided.

	RIGHT EYE				LEFT EYE
A.	CONGENITAL AND UNDETERMINED				
	000		Congenital anomalies		000
	010		Abiotrophies, etc.		010
	020		Tumour of globe and orbit		020
	030		Myopia		030
	040		Other errors of refraction		040
	050		Glaucoma, primary		050
	060		Cataract, primary		060
	070		Others (..........)		070
	090		Transmitted maternal infection		090
		091	Rubella	091	
		092	Toxoplasmosis	092	
		093	Others (..........)	093	
B.	INFECTIOUS AND TOXIC				
EXOGENOUS	100		Ophthalmia Neonatorum		100
		101	Gonococcal	101	
		102	Inclusion body	102	
		103	Others (..........)	103	
	110		Trachoma		110
		111	Other virus infections (..........)	111	
	120		Infections of outer coats of eye Bacterial. Specify :		120
	130		Others (..........)		130
ENDOGENOUS	150		Gonorrhoea		150
	160		Syphillis, congenital		160
	170		,, acquired		170
	180		Virus infections		180
		181	Measles	181	
		182	Smallpox	182	
		183	Virus meningitis	183	
		184	,, encephalitis	184	
		185	Herpes ophthalmicus	185	
		186	Herpes febrilis	186	
		187	Others (..........)	187	

	RIGHT EYE				LEFT EYE
ENDOGENOUS	200		Bacterial infections		200
		201	Diphtheria	201	
		202	Scarlet fever	202	
		203	Meningococcal meningitis	203	
		204	T.B. meningitis	204	
	210		Protozoal and metazoal infections not specified		210
	250		Phlyctenular, strumous, etc.		250
	270		Chronic septicaemia, etc.		270
	280		Others (..........)		280
C.	TRAUMATIC AND CHEMICAL				
	300		Birth injury		300
	310		Non-industrial trauma		310
		311	Household accidents	311	
		312	Play or sport	312	
		313	Traffic or transportation	313	
		314	Medical, surgical and radiational procedures	314	
		315	Self-inflicted	315	
		316	Assault	316	
		317	Others (..........)	317	
	320		Industrial trauma		320
		321	Mining	321	
		322	Quarrying	322	
		323	Chemical	323	
		324	Metal	324	
		325	Agricultural	325	
		326	Textile	326	
		327	Others (..........)	327	
	330		War injuries		330
		331	On active service : direct	331	
		332	Indirect	332	
		333	Radiational	333	
		334	Civilian	334	
		335	Others (..........)	335	

RIGHT EYE		LEFT EYE
340	Trauma, category not ascertained	340
350	Sympathetic ophthalmia	350
360	Chemico-toxic	360
400	Scheduled industrial diseases	400

D. SYSTEMIC DISEASES

RIGHT EYE		LEFT EYE
500	Anaemia and blood diseases	500
	501 Haemorrhage	501
	502 Pernicious anaemia	502
	503 Leukaemia	503
	504 Polycythaemia	504
	505 Others (.................................)	505
510	Diabetes	510
511	Hyperthyroidism	511
512	Lipoidosis	512
513	Other endocrine and metabolic diseases (.................................)	513
520	Nephritis	520
530	Disease of pregnancy and childbirth	530
540	Vascular diseases	540
	541 Essential hypertension	541
	542 Arterio-sclerosis	542
	543 Cerebral arterio-sclerosis	543
	544 Others (.................................)	544
550	Intracranial neoplasm	550
560	Disease of central nervous system	560
	561 Disseminated sclerosis	561
	562 Tabes	562
	563 Other syphilis	563
	564 Hydrocephalus	564
	565 Friedrich's ataxia	565
	566 Brain abscess	566
	567 Others (.................................)	567

RIGHT EYE		LEFT EYE
570	Functional Diseases	570
	571 Hysteria	571
	572 Malingering	572
	573 Others (.................................)	573
600	Arthritic affections	600
	601 Rheumatoid	601
	602 Spondylitis	602
	603 Others (.................................)	603
610	Disease of Bony System	610
	611 Oxycephaly	611
	612 Leontiasis ossea	612
	613 Others (.................................)	613
620	Nutritional deficiency	620
630	Diseases of skin	630
	631 Acne Rosacea	631
	632 Pemphigus	632
	633 Scleroderma	633
	634 Ichthyosis	634
	635 Epidermolysis bullosa	635
	636 Others (.................................)	636
640	Phakomatoses	640
650	Mesodermal syndromes	650
	651 Arachnodactyly	651
	652 Elastosis dystrophica	652
	653 Laurence Moon-Beidl	653
	654 Others (.................................)	654
E 700	NOT CLASSIFIED OWING TO LACK OF DATA	700
F 800	NO DEFECT (Normal eye)	800
G 900	(If category is not sufficiently specific, state any other cause ....)	

ANY MENTAL, NERVOUS, OR PHYSICAL DISABILITY IN ADDITION TO *BLINDNESS—SUBSTANTIAL AND PERMANENT DEFECT OF VISION (Ring category or categories applicable)

1. None
2. Mental defect
3. Deafness
4. Deaf-mutism
5. Defects of hands and arms
6. Defects of lower limbs
7. Fits
8. General disease (specify further if possible)
9. Other

* See NOTES at foot of first page of form B.P. 1.

CERTIFICATE

1. (*a*) IF AN ADULT, IS THE PERSON SO BLIND AS TO BE UNABLE TO PERFORM ANY WORK FOR WHICH EYESIGHT IS ESSENTIAL ? (Write " Yes" or " No") ......

    (*b*) IF UNDER 16 YEARS, IS THE PERSON SO BLIND AS ONLY TO BE CAPABLE OF EDUCATION BY METHODS SUITABLE FOR CHILDREN WHO HAVE INSUFFICIENT VISION TO BENEFIT FROM EDUCATION AS PARTIALLY SIGHTED ? (Write " Yes" or " No") ....

2. IF NOT SO BLIND AS TO BE UNABLE TO PERFORM ANY WORK FOR WHICH EYESIGHT IS ESSENTIAL,

    (*a*) is the person substantially and permanently handicapped by defective vision ? (Write " Yes" or " No") ....

    (*b*) if so is the handicap due to—
        1. Congenital defect ? 2. Disease or injury ? (Ring category applicable)...... ......

    (*c*) is the person, if under 16 years of age,
        1. Likely to become, before reaching that age, so blind as to be unable to perform any work for which eyesight is essential ? (Write " Yes" or " No") ....
        2. Likely to benefit by class for visually handicapped ? (Write " Yes" or " No") ......

    (*d*) or is the person, if 16 years of age or over, likely to become so blind as to be unable to perform any work for which eyesight is essential ? (Write " Yes" or " No") ....

    (*e*) if in the affirmative, is blindness likely to occur so soon, or is the nature of the visual defects such, that the person would benefit from training for employment or other services appropriate to blind people ? (Write " Yes" or " No") ....

Clinic...... (1) *Signature* ......
Ophthalmic Surgeon

Date...... (2) *Signature* ......
Ophthalmic Surgeon

PART III.—FURTHER NOTES

1. CAUSES OF EYE INJURY
    If eye defect due to industrial or non-industrial trauma :—
    (*a*) Precise occupation at time of onset ....
    (*b*) Description of accident, including nature of object striking eye or cranium ....
2. WASSERMAN TEST
    (*a*) Date specimen taken .... No. of specimen......
    (*b*) Result " Positive" or " Negative") ....
    (*c*) Action taken in positive cases ....

ACTION TAKEN ON RECOMMENDATIONS AND REGISTRATION FORM

(If no action necessary, write " Nil " across item.)

1. TREATMENT

......

2. SPECIAL EDUCATIONAL TREATMENT
    Date when reported to education authority ....
3. FURTHER EDUCATION, TECHNICAL OR PROFESSIONAL
    Date when reported to (*a*) local authority ....
    (*b*) education authority ....
    (*c*) Ministry of Labour and National Service ......
4. RE-EXAMINATION
    Interval duly noted ....

ANY OTHER RELEVANT INFORMATION

......

......

......

......

......

Reg. No... **B.P. 2**

CERTIFICATION OF PERSONS WHO ARE EITHER (1) SO BLIND AS TO BE UNABLE TO PERFORM ANY WORK FOR WHICH EYESIGHT IS ESSENTIAL OR (2) SUBSTANTIALLY AND PERMANENTLY HANDICAPPED BY DEFECT OF VISION.*

RE-EXAMINATION—MEDICAL CERTIFICATE FORM

(*N.B.*—This form should be attached to the original form relating to the person examined).

Name.. *Age*.............. *Date of Birth*..

Address..

	RIGHT EYE	LEFT EYE
Visual acuity—		
(*a*) unaided	....	....
(*b*) with correcting glasses	....	....
(*c*) both eyes — best direct vision after correction	......................(also ring appropriate category—(1) less than 3/60 ; (2) less than 6/60 ; (3) less than 6/36 ; (4) less than 6/18 ; (5) (6/18 or more.)	
Field of vision (Ring category applicable)	1. Nil 2. Less than 10° 3. Contracted 4. Central scotoma 5. Hemianopia 6. Good	1. Nil 2. Less than 10° 3. Contracted 4. Central scotoma 0. Hemianopia 6. Good
Globe, orbit, muscles, tension, nystagmus, etc.	....	....
Lids	....	....
Cornea	....	....
Iris and ciliary body	....	....
Lens	....	....
Vitreous	....	....
Choroid	....	....
Retina	....	....
Optic nerve	....	....

	DIAGNOSIS	
Main ocular disease producing *blindness / substantial and permanent defect of vision	(1)	(1) ....
Complications and sequelae	(2)	(2) ....
Other ocular diseases	(3)	(3) ....
Cause of main ocular disease	(4)	(4) ....
Onset of (i) blindness*	Age	Age ....
or (ii) substantial and permanent defect of vision	Age	Age ....

PROGNOSIS (1) Irremediable (2) Likely to deteriorate (3) Stationary (4) Likely to improve
(Ring category applicable)

Has treatment been recommended ?.................... Has this been carried out ?....................

If not, state reasons ....

....

Result of treatment..

Is treatment, or continuation of treatment, recommended ?.................... If so, state nature....................

....

Is further re-examination necessary ?.................... Interval....................

* See NOTES at foot of first page of form B.P. 1.

CERTIFICATE

1. (*a*) IF AN ADULT, IS THE PERSON SO BLIND AS TO BE UNABLE TO PERFORM ANY WORK FOR WHICH EYESIGHT IS ESSENTIAL ? (Write " Yes" or " No") ....

(*b*) IF UNDER 16 YEARS, IS THE PERSON SO BLIND AS ONLY TO BE CAPABLE OF EDUCATION BY METHODS SUITABLE FOR CHILDREN WHO HAVE INSUFFICIENT VISION TO BENEFIT FROM EDUCATION AS PARTIALLY SIGHTED ? (Write " Yes " or " No") ....

2. IF NOT SO BLIND AS TO BE UNABLE TO PERFORM ANY WORK FOR WHICH EYESIGHT IS ESSENTIAL,

(*a*) is the person substantially and permanently handicapped by defective vision ? (Write " Yes" or " No") ....

(*b*) if so, is the handicap due to—
1. congenital defect ? 2. disease or injury ? (Ring category applicable) ....

(*c*) is the person, if under 16 years of age,
1. likely to become, before reaching that age, so blind as to be unable to perform any work for which eyesight is essential ? (Write "Yes" or "No") ....
2. likely to benefit by class for visually handicapped ? (Write "Yes" or "No") ....

(*d*) or is the person, if 16 years of age or over, likely to become so blind as to be unable to perform any work for which eyesight is essential ? ....

(*e*) if so, is blindness likely to occur so soon, or is the nature of the visual defects such, that the person would benefit from training for employment on other services appropriate to blind people ? (Write "Yes" or "No") ....

Clinic.. (1) *Signature* ....
Ophthalmic Surgeon

Date.. (2) *Signature* ....
Ophthalmic Surgeon

ACTION TAKEN ON RECOMMENDATIONS

1. TREATMENT ....
2. SPECIAL EDUCATIONAL TREATMENT
Date when reported to education authority ....
3. FURTHER EDUCATIONAL, TECHNICAL OR PROFESSIONAL
Date when reported to (*a*) local authority ....
(*b*) education authority ....
(*c*) Ministry of Labour ....
4. RE-EXAMINATION
Interval duly noted ....

ANY OTHER RELEVANT INFORMATION

....

....

....

....

....

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